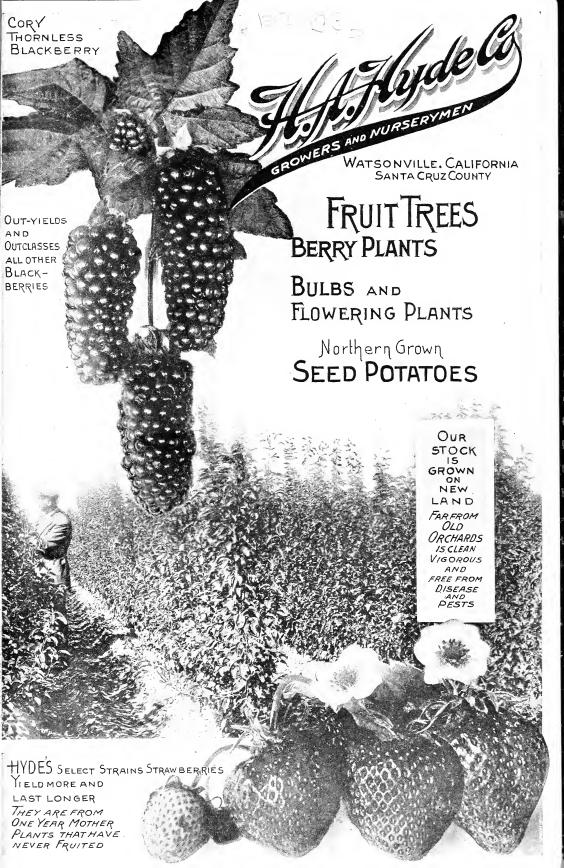
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Do not assume content reflects current scientific knowledge, policies, or practices.





HYDE'S FLOWER SHOP

HAS MAIN STREET
WATSONVILLE, CALIFORNIA

OUR down town store is conveniently located in the business section and orders for Cut Fowers, Flowering Plants, Floral Tributes or Floral Decorations for every occasion will have prompt and courteous attention.

We also carry a full line of Garden and Flower Seeds, Bulbs, Roots and Plants at seasonable times.

OUR Home Grounds and Offices at the head of Main Street are always open to visitors.

The Lily and Iris Fields, Flower Beds, Ornamental and Specimen Plants, Lath House, Green Houses, Berries and Fruits are all interesting to every home owner or grower.

You Are Welcome



We heartily endorse any organized effort of grower or dealer having for its purpose the improvement and standardization of planting stocks and varieties, and are members of the following organizations:

PACIFIC COAST HORTICULTURAL SOCIETY CALIFORNIA ASSOCIATION OF NURSERYMEN NURSERYMEN'S BUD SELECTION ASSOCIATION CALIFORNIA CERTIFIED SEED POTATO GROWERS We heartily endorse any organized effort of grower or dealer having for its purpose the improvement and standardization of planting stocks and varieties, and are members of the following organizations:

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Home Grounds, Offices
and Sales Yard
Head of Main St.
Watsonville, California
Santa Cruz County
To Acres



**D**URING The Many Years our business has been established we have systematically investigated the planting requirements of the commercial grower and have specialized in the production of high class Nursery Stock, Flowering Bulbs, Berry Plants and Seed Potatoes, establishing connections in the sections noted for producing the best planting stocks and where necessary taking charge of the growing and handling of the seed crop.

**Hyde's Trees and Plants** are well known to the growers of California, many of the finest, most productive commercial orchards having been developed from our trees.

**Hyde's Select Strawberry Plants** hold the record yield in the heaviest producing sections.

**Hyde's Northern Grown Seed Potatoes** have consistently produced record crops in the potato growing districts of California, due to their vigor and freedom from disease.

Our New Bulb Farm—We specialize in the production of high grade flowering bulbs for the florist trade and for outdoor planting, our home grounds having long been famous for the beauty of their fields of Godfrey Callas, Freesias, Iris and other flowering bulbs and plants—but many of our plantings were in other sections and to bring these growing operations more directly under our personal supervision, we purchased a splendid tract of land, the soil being ideal for bulb culture. Here we will have everything necessary for production and handling that will insure quality and facilitate our service.

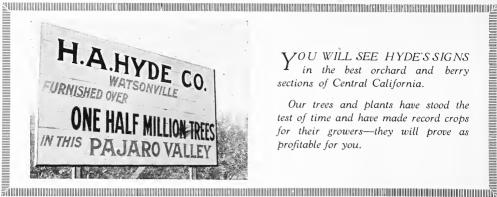
Northern Office—Following our policy of personal attention to the stocks we produce for our trade, we have maintained an office in Portland, Oregon, for the past two years, in charge of our Mr. Bowman, for handling our growing operations in Oregon and Washington. The plantings, seed selection, and field inspection have the personal supervision of Prof. J. E. Larson, a qualified agronomist and soil expert.

Our Northern organization is a permanent one and offers a dependable service to growers who recognize the advantage of having their planting stock grown to order.

If Interested in Commercial or Home Plantings, our years of practical experience qualifies us to serve you and Mr. H. A. Hyde will be glad to confer with, or advise you. This service may save you needless expense and help you to succeed.

H. A. HYDE COMPANY

### HOW TO ORDER—See Inside Back Cover



70U WILL SEE HYDE'S SIGNS in the best orchard and berry sections of Central California.

Our trees and plants have stood the test of time and have made record crops for their growers—they will prove as brofitable for you.

UR FRUIT TREES are carefully grown on new land in districts that are far distant from established orchard centers and are free from the diseases and infestations so prevalent in old orchards. We are therefore prepared to deliver clean, healthy young trees.

Budwood is all carefully selected by our Mr. Hyde—from the strongest,

most prolific trees in the best orchards of our State.

The selection of the budwood is important in perpetuating types that are shapely and uniform with the desired coloration, from trees that are regular and heavy producers. The trees we supply on your order will be not only clean, vigorous and true to name but will be from the best yielding most profitable types.

ADVANCE ORDERS—We make a specialty of growing trees to order any root stock or buds specified—a proposition that you should investigate.

### NEW SYSTEM OF GRADING ADOPTED

At the July convention of the California Association of Nurserymen, the following method of grading by caliper (diameter) of trees was unanimously adopted as standard and future price lists will show the caliper that is equivalent to the old listing of the height of the tree.

Caliper 11/6" to 3/4" diameter (formerly graded as

6/8 ft.)
Caliper  $\frac{1}{2}$ " to  $\frac{1}{6}$ " diameter (formerly graded as

4/6 ft.) Caliper  $\frac{3}{8}$ " to  $\frac{1}{2}$ " diameter (formerly graded as 3/4 ft.)

Caliper 1/4" to 3/8" diameter (formerly graded as 2/3 ft.)

Caliper 3/6" to 1/4" diameter (formerly graded as 18/24 in.)

To apply on all deciduous fruit trees except figs and walnuts.

Figs and walnuts to be designated by length, as follows: 8/10 ft., 4/6 ft., 3/4 ft., 2/3 ft., and 18/24 in.

As the new standard becomes generally known, grading by the height will be discontinued.

## APPLES

Apples are a great specialty with us and our long experience and location in the heart of the greatest producing section qualifies us to serve and advise you.

We list only the most desirable varieties for home and commercial plantings but can supply any sort that is available in the trade. It will pay you to confer with us before planting.

10 100 1000 **PRICES** 4 to 6 ft.....\$5.00 \$45.00 \$400.00 3 to 4 ft..... 4.50 40.00 350.00

50 or more at 100 rate, 300 or more at 1000 rate

**DELICIOUS**—Large, conical, crisp, juicy and fine grained. Mild acid flavor. Color bright red splashed yellow. Good for high altitudes. Good keeper. October to February.

In sections where red apples are not successful, Delicious has given splendid results. budwood is from the original Stark stock and at 14 years the trees are producing over 15 boxes of fancy fruit.

YELLOW BELLFLOWER—Fruit large and conical. Lemon-yellow skin with slight blush on sunny side. Tender, juicy, crisp, subacid. Tree is hardy and productive. September to

Our Bellflower budwood is taken from what we believe to be the record Bellflower treeaveraging 85 boxes annually for the past 5 years—one year bearing 104 boxes.

### APPLES—Continued



There are 2300 trees in this orchard producing annually over 35,000 boxes of fancy Newtown Pippins

**GRAVENSTEIN**—Large fruit striped with red and orange. Crisp, tender and juicy, subacid flavor. Tree is vigorous grower and no family orchard is complete without it. August to September

MISSOURI PIPPIN—Large, oblate. Shaded, striped and splashed light and dark red with gray dots. Flesh white, inclined to be coarse. Moderately juicy, subacid. A good red for Central California and one of our best pollinators.

**RED ASTRACHAN**—Large dark red unless grown in shade which gives the fruit a greenish-yellow color. Flesh white, juicy and crisp with rich acid flavor. Strong grower, early and productive.

RED JUNE—Fruit red, medium sized, roundish to oblong. Flesh white, juicy and subacid. A good early red variety. June to July.

A good early red variety. June to July.

SKINNER SEEDLING—A local variety of superior excellence, having no equal in its class. Large yellow with light blush cheek. Flesh white, tender and juicy. Responds profitably to good culture. Popular in coast counties of California. September and October.

SPITZENBERG—Color red. Flesh yellow, firm and juicy, subacid, delicious flavor. Splendid variety for mountainous sections. Tree is of upright habit and healthy. November to March.

WHITE WINTER PEARMAIN—Medium to large, oblong type. Skin greenish-yellow with slight blush. Flesh light yellow, tender, crisp, juicy, subacid. A general favorite. Tree vigorous and the best variety for replacements in old apple orchards. Our parent stock has consistently averaged 40 boxes to the tree. November to January.

WINESAP—Staymen-Yellow striped red. Firm, crisp and juicy with a rich subacid flavor. Drouth resistant and grows and yields well.

Drouth resistant and grows and yields well. WINTER BANANA—Skin golden yellow with blush cheek. Flesh lemon-yellow, fine grained and aromatic. Tree vigorous and hardy. Bears early for a winter sort.

Our budwood trees growing on sandy foothill soil are averaging over 30 boxes to the tree of highly colored wax finished apples that bring top prices.

bring top prices.

YELLOW NEWTOWN PIPPIN — Smooth, greenish yellow skin with brownish-red cheek. Medium sized, crisp, juicy and aromatic. Good keeper. Planted extensively, being a standard shipping variety as well as a family orchard favorite. December to May.

Watsonville Newtowns are world famous and our bud wood is from trees bearing fruit of the most desirable shape and coloration and with an average yearly record of 35 boxes per tree.

### CRAB APPLE

PRICES 4 to 6 ft.....\$5.00 \$45.00 \$40.00

**RED SIBERIAN**—Yellow with scarlet cheek. Bears early and abundantly. An old favorite, being excellent for jellies, sweet pickles, preserves, etc. Ripens in September.

**TRANSCENDENT**—Large golden-yellow with red cheek, slightly ribbed and flattened at ends. Fine flavored; hardy and productive. Makes good cider.

## APRICOTS



The O. O. Eaton A pricot Orchard in the Pajaro Valley near Watsonville—one of the best young orchards in this section

PRICOTS have recently developed great possibilities as larger markets are opening up and California is the heaviest producer.

Only certain favored sections can be depended upon for best results and if your conditions are right for Apricots they will prove a very profitable crop. For years the largest apricot orchard

in the world was in the Pajaro Valley, 225 acres.

Our Apricot stocks have all been budded from record trees and we refer with pride to the McCorkle Orchard and the O. O. Eaton Orchard in the Pajaro Valley and the Sterling Orchard in the Salinas Valley as proof of the quality of our trees. In the Eaton orchard, shown at top of this page, the first block of 3,000 trees was planted by Mr. Eaton in 1911, and 3,000 trees in each of the two succeeding years, making a total of about 130 acres.

The trees are of the best strain of Royals, personally selected by our Mr. H. A. Hyde.

orchard, one of the most beautiful in the famous Pajaro Valley, is but one of the many splendid

'cot' orchards that have been planted to Hyde's trees in the valleys of Central California.

100 1000 PRICES 4 to 6 ft.....\$5.00 \$45.00 \$400.00 3 to 4 ft..... **4.50** 40.00 350.00 On Apricot and Peach—On Myro 5c higher.

ROYAL—Medium to large fruit depending upon the thinning out. Oval type, slightly compressed. Skin yellow, shading to orange on sunny side with faint red tinge. Flesh pale orange, firm, juicy and delicious. A standard shipping, drying and canning variety. Ripens early June

MOORPARK-Large variety with orange skin shading to deeper orange or brownish-red in Flesh bright orange, quite firm and juicy with rich luscious flavor. A favorite commercial variety in some sections.

BLENHEIM-A little larger and ripens somewhat later than the Royal. Grows vigorously producing rich juicy fruit. Flesh deep yellow. Splendid canning and drying sort. In many sections of California the Blenheim and Royal have identical characteristics and the same season, making it impossible for experts to agree as to whether or not they are really the same variety.

TILTON-One of the best "cots" for the warm interior valleys. In the coast sections we

advise Royal or Blenheim.

### NECTARINE

Nectarines will thrive wherever Peaches can be grown. We offer three standard sorts.

10 100 PRICES 4 to 6 ft.....\$5.50 \$50.00 3 to 4 ft.... 5.00 45.00

GOWER—Not only the earliest of all Nectarines but has every desirable quality, being rich and delicious, freestone, yet firm and in big demand as a shipper. Grows vigorously, bears heavily.

STANWICK-Large fruit, rich and juicy. Flesh white and sugary. Skin greenish-white turning to deep rich violet in the sun.

NEW WHITE—Fruit round and large. Free small pit; flesh white, rich and delicious; skin white. A favorite in Nectarine sections.

### OUINCE

100 4 to 6 ft.....\$5.50 \$50.00 PRICES 3 to 4 ft.... 5.00 45.00

APPLE—Large early variety. Very productive. Skin golden-yellow. Ripens August and September. A popular and dependable sort. PINEAPPLE—Smoother and more globular than the Apple Quince. Excellent for iellies. Flavor suggestive of pineapple.

## PEARS

GROW PEARS—They thrive in most any good soil and grow to great perfection in many sections. They have a long selling season and some varieties bring fancy prices for exporting. These are some of the advantages that make Pear growing a very profitable investment.

If your land can grow Pears we will be glad to confer with you as we are familiar with California conditions and markets.

Our list of varieties includes the best commercial sorts and we can advise you in the selection of winter shipping varieties.

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We have made a special study of root stocks, cross pollenization and various problems of propagation and culture of Pears and will be glad to advise or confer with you about your plantings.

Prices F. O. B. Watsonville, packing at cost  $10 \quad 100 \quad 1000$  6 to 8 ft. . . . \$6.00 \$55.00 \$500.00 4 to 6 ft. . . . 5.50 \$50.00 \$450.00 3 to 4 ft. . . . 5.00 \$45.00 \$400.00

50 or more at the 100 rate, 300 or more at 1000 rate

BARTLETT—Large, bright yellow with red blush. The white, fine grained flesh and excellent quality makes Bartlett the leading commercial and home variety. A vigorous heavy producer that thrives under many varying conditions. Ripens August.

BEURRE HARDY—Large, greenish with light brown russet. Quality excellent, being sweet, rich and subacid. One of the very best varieties for export. Tree of great vigor and develops very early. Ripens after Bartlett.

BEURRE BOSC—Large, long, shapely fruit, heavily russeted. The white fine grained flesh is of the finest quality. Brings highest prices in the export trade. Grows to great perfection in the Santa Clara Valley. Bears heavily and regularly. October.

BEURRE CLAIRGEAU—Large Autumn variety. Yellow, shaded red, with russet dots and splashes. Flesh yellow, juicy and well flavored, but its value depends upon its attractive coloring. Grows well and bears early. Ripens September.

BEURRE D'ANJOU — Medium to large. Smooth greenish-yellow; blush cheek, dotted and russeted. Melting and juicy. A good keeper and standard commercial variety. Ripens October to November.



Winter Nelis—a dependable commercial Pear, also one of the best for home use. The young trees have a tendency to grow crooked, but straighten up as they develop.

**COMICE**—Large, light yellow with crimson shading and russet dots. Flesh fine, white, of unsurpassed quality, and in big demand for exporting, but is a shy bearer requiring proper pollination.

EASTER BEURRE — Large yellowish-green with russet dots. Flesh white, sweet and juicy. Bakes well. A standard commercial sort. October-November. Large, vigorous tree.

**FORELLE** — Medium, greenish-yellow with bright red cheek, brown spots—quality fair—a good shipper and is sold on its attractive appearance. Requires special care in growing. October.

P. BARRY—Large, deep yellow with golden russet. Flesh white, rich and juicy. A good shipper. Grows rapidly, bearing early and heavily. November.

GLOUT MORCEAU—Large, variable, sometimes being ribbed. Skin greenish-yellow; flesh white; quality good. A strong, vigorous grower and good cropper. November.

WINTER NELIS—Medium size, yellowishgreen, dotted russet. Flesh fine grained, rich and sweet with a delicious aromatic flavor. Very productive and equally valuable for home or commercial orchards. November. In big demand during the holiday season.

## PRUNES and PLUMS



PRUNES and PLUMS are sure croppers, find a ready market, and cost less to prune, spray and

care for than most other orchard crops.

The Improved French Prune that we offer is stock from the Chadburn-Turner orchard at sun. The trees have larger foliage and a more pendulous or weeping habit than the original type and the fruit averages much larger, running from 40's to 50's. We quote Mr. J. R. Chadburn, a successful orchardist of Suisun, Solano County, as follows: "I can frankly state that it is fully entitled to the name 'Improved French Prune' and as a fruit grower I would recommend that purchasers give preference to this variety due to its many superior qualities."

Plums are always in good demand for canning and shipping, many varieties bringing fancy

prices for the fresh fruit trade.

From our Coast sections the "Santa Rosa" plum has proven a money maker for Eastern shipment and there has never been enough to supply the trade. Another profitable variety to grow is the Yellow Egg," which leads as a canning sort. It bears heavily and is vigorous and dependable.

		10	100	1000	
	6 to 8 feet	\$5.50	\$50.00	\$450.00	These prices are for Peach
PRICES	4 to 6 feet	5.00	45.00	400.00	or Almond root. If wanted on
	3 to 4 feet	4.50	40.00	350.00	Myro add 5c each.

### **PRUNES**

Improved French—The variety most extensively planted in California for drying. This Improved French Prune is uniformly larger than the common type, the color is violet-purple. The quality is unexcelled, being rich and sugary, bears heavily and regularly.

The stock we offer is the true one, our budwood being selected from the best bearing

orchards.

Imperial Epineuse—Large purplish-red of oval form with thin skin. Flesh is greenish-yellow, fine flavored and very sweet. Earlier than the French. Yields heavily every year.

Italian — (Fellenberg) — Large, oval, purplish skin; flesh greenish-yellow, rich and sweet with distinctive flavor. of the best either for drying or fresh fruit. A vigorous grower and good producer.

Robe de Sergeant—Very deep purple, medium to large. Flesh greenish-yellow, sugary and deliciously flavored. Slightly adheres to pit. Ripens August and September. Valuable for drying and shipping.

**Silver**—A seedling of Coe's Golden Drop. Similar in appearance but more productive. Very satisfactory for drying and canning. Ripens September.

Sugar—A Burbank seedling. Large, early, color a dark purple; flesh sweet and tender. Ships well. Ripens in August. Must be thinned and pruned for best results.

### **PLUMS**

Burbank-An early, fine flavored, juicy plum imported from Japan. Large in size with very small pit. Color rich cherry red, mottled with yellow. Flesh deep yellow. Tree vigorous, productive, coming into bearing very early.

Climax—Large heart shaped, deep red in color. Flesh yellow, of excellent flavor. Very early. Especially valuable as an early shipper.

Ripens middle of June.

Damson—(Shropshire)—Fruit small, juicy and subacid flavor. Excellent for preserves. Purple skin. Ripens September. Tree hardy and productive.

Green Gage—Skin greenish-yellow. Fruit rather small. Flesh pale green, juicy and exceedingly rich. Freestone. A standard

canning variety.

Satsuma—(Blood Plum)—Large fruit nearly round, pit small. Flesh dark purplish red throughout, firm and juicy. Tree small but

hardy and productive.

Santa Rosa—A deliciously flavored plum of large size, pit small. Color deep purplishcrimson. Flesh yellow with crimson markings near skin, rich and juicy. Has excellent shipping qualities. Ripens early July. Wickson—Deep wine red with rich yellow flesh.

Very juicy with agreeable distinctive flavor.

A crossbred by Luther Burbank.

Yellow Egg—Large egg-shaped plum; subacid, of excellent cooking quality and when fully ripened is rich and delicious. One of the most profitable canning varieties.

## **PEACHES**

THEIR quick development, early bearing and the canning demand at good prices make peaches one of the most profitable orchard crops and in sections that are free from frosts early peaches bring good returns. Care should be taken in the selection of varieties and only those that stand shipment should be grown.

The following list includes the most useful commercial varieties and as we grow many others that we do not list we will be glad to confer with you about your plantings. We can give you the information and right varieties for special purposes, home orchards, canning, shipping or drying.

100 1000 **PRICES** 4 to 6 ft.....\$5.50 \$50.00 \$450.00 3 to 4 ft..... **5.00** 45.00 400.00

### **PEACHES—Freestone**

Alexander—Medium to large, extra early variety. Flesh greenish-white, firm, juicy and sweet. Good shipper. Trees very productive and bear young. Partially free.

Briggs Red May—A standard early variety, medium to large. Skin white with bright red cheek. The first early peach to stand shipping, being almost as early as Mayflower and we believe it to be a superior commercial variety.

Early Crawford—Very large oblong variety with excellent canning and table qualities. Flesh yellow, sweet and of rich flavor. Skin yellow with red cheek. Very productive. *Note*—Commercial planters will find Foster a superior type and more profitable in this

Late Crawford—Large round with deeper coloring than Early Crawford. Flesh deep yellow. Excellent for canning.

Elberta—Very large round, bright yellow with red cheek. Flesh yellow, juicy, rich and sweet. Pit entirely free. Tree prolific and bears regularly. Largely grown for fresh fruit Good shipper.

Hales Early-Medium to large, greenish skin nearly covered with red when ripe. Flesh

white.

J. H. Hale—Skin very smooth. A little larger than Elberta and ripening about the same time. Flesh yellow, of splendid quality.

Good for shipping and drying.

Foster-Large, deep orange color, turning to red in the sun. Flesh is yellow, rich and juicy, of the finest quality. Very hardy and a good producer. Ripens ahead of Early Crawford which it resembles, but commercial planters are turning to Foster as being superior in every way.

Lovell—Large, round yellow, very uniform. Flesh yellow, firm and richly flavored. A splendid canning, shipping and drying variety. Tree good grower and productive. About ten

days later than Muir.

Muir-Large and firm with a richness that makes it a favorite for drying, canning and shipping. The pit is small and free. Tree very vigorous and productive. Ripens August.

Mayflower—Considered the earliest variety. Skin red, flesh white, of excellent quality. medium to large in size. Tree hardy.



Briggs Red May

Salway—A splendid late sort. Flesh deep yellow, turning red at pit. Skin clear yellow with crimson cheek. Ripens late September or October and its chief value lies in its easy drying and shipping qualities.

Strawberry—Medium sized oval with skin marbled red, flesh is white, rich and juicy.

A good grower,

Note—This is not the first early peach that is so often referred to as Strawberry but is a splendid distinctive sort.

### PEACHES—Clingstones

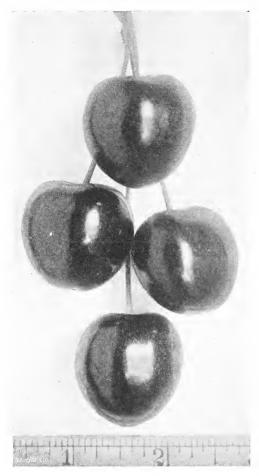
Orange Cling—Deep orange with red cheek. Flesh deep yellow, firm, juicy and of rich flavor. Very large in size. Ripens August. Pelora—Large yellow Clingstone desired by canneries. Small pit. Flesh clear yellow

throughout, and fine grained with the additional quality of being exceptionally firm, thus standing shipment to canneries better

than most sorts. Ripens early August. Phillips Cling—Large, high colored, clear yellow to the pit, which is very small. Its firmness, richness and flavor making it especially valuable for canning. Ripening period extends over two weeks. Early Sep-Ripening Thrives best on moist soil. tember.

Tuscan Cling—(Tuskena)—The earliest of the Clingstones, ripening about the middle of July. Large size. Skin yellow with slight red blush. Flesh firm and juicy. Tree is vigorous grower. The "Tuscan" of central California is one of our most valuable varieties and should not be confused with the Tuscan of southern California, which is different and not grown

## **CHERRIES**



Black Tartarian—Bright purplish black. Fruit of large size, sweet, juicy and richly flavored. Tree grows erect and vigorously and is very productive. Ripens medium early. A standard shipping variety. Our buds are from an unusually heavy producing strain that have never missed a year and are self-pollinating.

Black Oregon—Also known as Black Republican and Lewelling. A large, sweet variety ripening a little later than the Black Tartarian. Good shipping sort. Also a valuable pollenizer.

**Bing**—A very large black cherry of superb quality, being firm yet crisp and delicious. Ripens evenly, makes a fine appearance and is a good shipper. A vigorous grower and heavy producer. Medium early.

CHERRIES require a deep, rich, well drained soil and if you have the right conditions are a sure and profitable crop.

Productiveness and longevity of cherry trees in California are established facts—and the Bay and Coast sections, river bottoms, lowlands of the foothills and the mountain valleys offer the most favorable conditions. Care should be used in choosing varieties as some thrive where others fail. While requiring plenty of moisture they are easily killed by too much water and poor drainage; also an irregular irrigation may bring fruit out of season.

A too rapid growth often causes the buds or fruit to drop but later when well established they bear heavily and regularly. Not having proper pollenizers also causes great loss.

Exposure is important as cherries bloom early and a location should be chosen that will protect from frost and be open to sunlight.

Planting distances, pruning and cultural methods vary with location and conditions. We will be glad to confer with you on these subjects and advise as to varieties and best pollenizers.

**Burbank**—A very early, large, fine flavored, rich deep crimson variety. Sweeter than other early sorts. Tree is a vigorous grower and very prolific.

Lambert—Large, dark, purplish-red. Sweet, firm and of excellent quality. Ripens after Royal Anne. One of the best market sorts. Tree is large and makes a rapid growth, bearing early and heavily.

Early Richmond—(Kentish)—An early red variety of medium size. Very productive, juicy and rich acid flavor. Valuable for cooking.

Royal Anne—(Napoleon Bigarreau)—Referred to by Wickson as the "great commercial cherry of California." Large, pale yellow marked with bright red; flesh is firm, very sweet and juicy. Tree is very vigorous and yields enormously if properly pollinated, but proves a shy bearer under unfavorable conditions.

## FIGS

 ${f F}^{\rm IG}$  TREES can be grown successfully in most sections of California and as yet have no serious pests or diseases, but care in the selection of varieties suitable to the growing conditions is necessary for profitable results in fruiting. To produce the finest quality fresh or dried figs, the soil and moisture must be right. We will be pleased to take up the details of culture, irrigation and choice of varieties and pollination with anyone interested in growing figs.

There are many excellent varieties in various sections, some identified, others not, and there is

yet much work to be done before they can be rightly classified as to their value and identity.

We list three leading sorts and can furnish others to your order.

Price, 4 to 5 ft., per 10, \$4.50; per 100, \$40.00; per 1000, \$350.00

White Adriatic—This variety is planted extensively and is the California white dried fig of commerce. The fresh fig is medium size, rounded, with thin greenish skin turning yellow in the sun. Pulp red or white with violet streaks. Very heavy producer. Kadota-Medium size golden yellow, pulp

Black Mission-The oldest, most widely distributed. Color is dark purplish mahogany, the pulp a brownish yellow. Dries well in

ful preserve. Note—Beware of hogs. They are very fond of the bark and will girdle your fig trees if allowed to run among them. Gophers are another deadly enemy, as they like the roots and can do much harm in a short time.

#### ORANGES AND LEMONS

WE LIST one orange and one lemon leading varieties. If interested in other sorts or commercial plantings we are prepared to furnish any variety available in the trade and can give you much useful information as to location and culture.

#### ORANGE

Washington Navel—The finest of all oranges, large, thin skinned and seedless, with a refreshing, luscious richness unequaled by any other orange. Makes a quick growth, bears very early and heavily.

Fine 2-year trees, each \$2.50

#### LEMON

Eureka—This is the popular variety for the coast section and has every desirable quality. Is a good keeper and has few seeds. Medium size, sweet rind. The tree is quite free from Fine 2-year Trees, \$2.50 each thorns.

#### PERSIMMON

white tinged pink. Has a long ripening season.

Good shipper; dries well, and makes a beauti-

Persimmon Trees make very attractive specimens, groups or borders for ornamental plantings, and the improved varieties are very valuable for their fruit. If interested in commercial plantings, will furnish complete information on request and quote on your needs. Price, grafted, ea. \$1.50; 10, \$12.50 LOOUAT

Loquats have been greatly improved in late years and many varieties are now very profitable for their fruit crops and are also very ornamental, broad leaved evergreens. We offer the improved budded varieties.

Choice Trees, each \$2.50 **OLIVES** 

Mission—This variety introduced into California by the early Spaniards is grown in most every section of California. Tree vigorous and very prolific. Ripens late. A standard commercial variety in good demand.

Price, nice trees, \$1.00 each

### GRAPES

RAPES are in greater demand and at better prices than ever before and this important industry Grant and an action of the same and the second of the same and profitable is awakening from its temporary decline to what promises to be a permanent and profitable basis. Climate and soil have much to do with the quality and the grower should confine his plantings to varieties known to his section. Prices, except where noted: 10, \$1.00; 100, \$4.00; 1000, \$35.00

White Muscat — Oblong, light transparent yellow with heavy bloom that gives an attractive finish when dried. The growth is bushy and the grapes are in large; loose clusters, and are very rich and sweet. The most important raisin grape of California.

Mission—This is the grape introduced in the early mission days and is widely distributed, thriving in most every section of California. Medium size, dark blackish purple. sweet and delicious.

Zinfandel—Large, dark purple grapes in large compact bunches. Has heavy bloom. Thrives under any average condition. This was one of the leading claret grapes of California.

Emperor—A large, purple, oval berry in large loose bunches. A vigorous grower and good shipping variety for San Joaquin and other interior valleys.

**Sultana** — Seedless — Small, firm and crisp. Color golden yellow. Compact large bunches: heavy producer, good grower. The original seedless raisin grape, but in California sometimes develops a few small seeds.

Thompson Seedless—Small yellow berries in large bunches. Entirely seedless. A strong grower and heavy producer. The finest seedless raisin grape, and also a splendid shipping variety. Grown extensively in most sections of California.

Tokay—Flaming Tokay—Large, red berries in large bunches, heavy bloom. Tokays are crisp, sweet and delicious, a vigorous grower and a leading shipping variety.

Isabella—Regia—Described as a giant leaved

very prolific sport of Isabella, a bud variation originating at Santa Clara. The large purple berries have a delicious sweetness and pleasing Price, each 40c; 10, \$3.50

## NUT TREES

LMONDS—As a rule in choosing a location the low lands of the small valleys should be avoided and the slopes and bench lands chosen that are free from fog, strong winds and frosts.

While the low lands of small valleys are not favorable the low lands of the large valleys of Sac-

ramento and San Joaquin are the heaviest producing sections.

Loose, light, warm soil that is well drained is preferred. Enough moisture must be available from rain or irrigation to produce the crop but Almonds will bear well on soil that is too light and dry for peaches, apricots, etc., possibly on account of the deeper rooting habit of the Almond.

Almond trees grow large and should not be planted closer than 24 to 30 feet. Old trees of un-

desirable varieties can be easily worked over by methods of budding or grafting.

We list the three varieties most widely recognized for their commercial importance: Non Pareil, Drake's Seedling and Ne Plus Ultra. Experience has shown that for pollenizing and commercial requirements it is recommended that they be planted in the ratio of  $\frac{1}{2}$  Non Pareil,  $\frac{1}{2}$  Drake's Seedling,  $\frac{1}{2}$  No Plus Ultra. Non Pareil has a longer blooming period than either of the above named varieties and Ne Plus Ultra blooming ahead of Drake's Seedling, the two cover the blooming period of Non Pareil.

Dur budwood is selected from trees of the best producing most desirable types. This selection of the budwood is the biggest factor in the financial success of your planting.

> 100 1000 **PRICES** 4 to 6 feet . . . . . . . \$3.50 \$30.00 \$250.00 3 to 4 feet..... **3.00** 25.00 200.00

NONPAREIL—Large, thin shelled, full meated nut. The trees are of a pendulous or weeping type, bearing heavily and regularly and ripen before other varieties

NE PLUS ULTRA-Large, long, soft shell with full meat, hull free. Yields heavily and regularly. Is a valuable pollenizer and a standard commercial sort.

DRAKE'S SEEDLING—Large, thin shell with full sweet kernel. Very prolific and dependable blooms late. There appears to be several strains but our budwood is taken from the largest,

best yielding type.

ALNUTS will give good results under varying conditions of soil and location if moisture is sufficient either from rainfall or irrigation, but should not be planted in poor dry soils. They thrive best in deep, rich, moist soils and respond readily to good culture, making a rapid growth and bearing early when given proper attention. We offer four leading varieties, all grafted trees as we never recommend seedlings. Prices, Grafted, 4 to 6 ft., each \$1.50; per 10, \$13.50; per 100, \$125.00 6 to 8 ft., each \$1.75; per 10, \$16.00; per 100, \$150.00

FRANQUETTE—This is the standard commercial variety that is most widely distributed. A large, elongated nut of the finest quality. A good grower, blooming late, bears heavily and is not subject to blight.

PAYNE'S SEEDLING—A large, shapely nut of excellent quality, bearing very early and is so prolific that pruning is necessary to keep the tree from being stunted by bearing too early and too heavily. Care in choosing a location is necessary as the extremely early blooming may result in loss from frost injury.



WILSON WONDER—The immense nuts, larger than any other variety, are uniform and of good quality, but being large they require favorable conditions to fill well. They begin bearing the second year, the nuts forming in clusters. The tree makes a rapid and spreading growth, being specially desirable for home grounds. **EUREKA**—A large, long nut with full light-colored

kernel easily taken out whole. A very valuable commercial type specially recommended for the interior valleys. Has heavy broad foliage; blooms late.



Payne's Seedling

## ORNAMENTAL TREES and SHRUBS

THESE add so much to the beauty and value of their surroundings, are inexpensive to buy and require a lively pensive to buy and require so little care that they should be planted whenever and wherever possible. The following list has been carefully chosen as being sure to thrive and give splendid satisfaction in this section. If you wish specimen trees or other varieties we can supply anything available in the trade.

- **Prices**—We have a good stock in pots and cans; also in the nursery row that will be "balled" during the winter but as this stock varies in size and price and is constantly moving, special prices will be made on request on such items as are not priced in this list.
- ALMOND-Double Flowering-Early blooming, free flowering before foliage appears. Makes a rapid grown. We offer two colors.

Red or White. Price each \$1.00

- APPLE-floribundi-Single flowering rosy red.
- **APPLE**—Bechtel's Double Flowering Large, fully double, pink, fragrant blossoms in greatest abundance. Each \$1.00
- BERBERIS darwini Attractive evergreen shrub with slender drooping branches, rich green, small leaved, prickly foliage that turns red in the Fall, carrying its bright color through the Winter. Yellow flowers are borne in great profusion in the Spring. Berries Price each 50c
- CHOISYA ternata Mexican Orange Compact shrub with fragrant light green foliage. Bears in greatest profusion; great clusters of fragrant white flowers. Choice Plants, each \$1.25 growing.
- COPROSMA baueri Low growing shrub that can be trained to a pillar. The rounded green leaves are very glossy and beautiful. Flowers inconspicuous but followed by clusters of showy yellow berries. Each 50c
- **COTONEASTER** horizontalis Branches very low, spreading close to the ground. Foliage small, turning red in Winter. Flowers light pink. Bears brilliant red berries in greatest profusion, remaining through the Winter. Price each 50c
- COTONEASTER—pannosa—Upright habit of growth. Branches long and slender with reddish purple bark. Foliage rich green with silvery color beneath the leaves. Flowers white. Berries bright red in great abundance, remaining on the branches if cut. A good hedge and border plant.

Prices: 12 to 18 inch, 40c; 2 to 3 feet, \$1.00 COTONEASTER—angustifolia—Grows erect to about 8 feet. Is of spreading habit.

Branches spiny, long narrow leaves, abundant orange yellow berries that color up late and hold through the winter.

Price, 4-in. pots, 50c; 1 to 2 ft., \$1.00 CYTISUS - canariensis - Canary Is'and Broom—Leaves and branches are very downy Flowers in compact racemes, bright yellow and fragrant. Makes a dense growth. 8 to 10 feet. Price each 50c

- DIOSMA-ericoides-Breath of Heaven -Foliage minute, similar to heather. Very fragrant if bruised. Flowers white, starshaped, very small, but completely cover the bush. Price each 35c to 75c
- **ERICA melanthera** A wonderful winter blooming heather. Rosy colored flowers with conspicuous black tipped stamens.

Price, 4-inch pots, 75c Balled, 1 to 2 ft., \$1.50; 2 to 4 ft., \$3.00

- ERICA-mediterreanea-More compact than melanthera; darker green. Flowers freely. Price, 6-inch pots, \$1.00
- ESCALLONIA rubra Tall growing shrub with glossy dark green foliage, bright rose-pink Each 50c to 75c flowers.
- **EUONYMUS** japonicus Beautiful broadleaved evergreen shrub. Each 50c
- EUONYMUS AUREA—Dwarfer than onicus" with deep yellow margining on foliage. Each 50c
- **HYDRANGEA**—hortensis—The fine foliage and large clusters of lovely pink flowers make this variety a great favorite in California. Blooms throughout the season.

Price 35c; extra heavy, 75c

- HYPERICUM moserianum St. Johns Wort-Low growing, hardy border plant, light green dense foliage. Deep yellow attractive flowers borne freely. Likes partial shade. **Price each 60c**
- **KERRIA**—**japonica**—Hardy free growing shrub with bright green foliage and stems, the tall slender branches bearing a profusion of rich Price, 4-inch pots, 50c yellow flowers. Gal. cans, each 75c
- LAURUSTINUS-Grandiflora-The best of its class. Large glossy leaves and large flower clusters freely borne. One of the finest evergreen shrubs and hedge plants. Price, nice plants, each 50c

- LANTANA—Weeping—Lavender flowers on long slender stems, borne continuously. Has slender trailing habit. Fine for boxes or covering embankments. From 5-in. pots, 50c
- NANDINA Domestica The bright green foliage turns to dark red in the Fall and the white flowers on erect panicles produce bright red berries in contrast to the darker foliage. A very unusual and handsome shrub. Slow growing, reaches 5 to 6 feet.

Prices, good plants, \$1.25 each

### ORNAMENTAL TREES AND SHRUBS—Continued

**LAUREL**—English—Broad, heavy, evergreen leaves, serrated. Flowers white, followed by black cherry-like fruits. Fine specimen or hedge shrub. Will grow 10 to 12 feet high.

Price, 3 to 4 feet, \$1.25 each

LILAC-These old favorites come in many new and splendid varieties. We offer the White, Purple and the Cut Leaf Persian Blue. Price each 75c

LILAC—Grafted—

Ludwig Spaeth, rich violet purple, single. President Grevy, splendid lilac blue, large, double

Marie Legrave—White, single, free and early

bloomer.

Price, named sorts, each \$1.00

MAHONIA — aquifolium — Oregon Grape— Native shrub with glossy dark green foliage turning to rich shades of red in autumn. Yellow flowers followed by clusters of blue berries. Strong plants, each \$1.00

#### PITTOSPORUM

Shrubs or small trees of several species, very valuable in ornamental plantings, some bearing very attractive flowers. The varieties we list grow to great perfection in California and are very valuable either as specimen trees or trained for hedge plants.

P. eugenioides—Bright yellowish green foliage, the leaves being wavy and growing larger when planted alone for a tree and smaller if in hedges. The fragrant yellow flowers are borne in clusters. Makes a splendid hedge or can be grown as a specimen tree, attaining a height of 30 to 40 feet.

Price, in gal. cans, 60c each

P. undulatum-Victorian Box-Makes a fine shapely tree about 40 feet or can be trained into a hedge. The tapering leaves are wavy margined and larger than other varieties. The flowers are fragrant, yellowish-white in color. Price, in gal. cans, 70c each

P. tenuifolium (P. nigricans)—Can be grown as a hedge plant or as specimen tree will attain a height of about 40 feet. Foliage darker green than P. eugenioides. Notable on account of its black flowers

Price, in gal. cans, each 75c Balled, \$1.50 to \$3.00 P. tobira — Japanese — Dense, tall, rounded shrub. Foliage dark green above, lighter below. Showy white fragrant flowers.

Each 50c to 75c

PEACH—Double Flowering—Blooms in the greatest profusion in the early spring before the foliage appears. We offer three colors. Pink, White Red. Price each \$1.00

POMEGRANATE -"Wonderful" Very attractive ornamental flowering trees.

Price each 75c to \$1.00

PRIVIT—California—Useful and ornamental, quick growing hedge plant. Price, each 20c, doz. \$2.00

PRUNUS — ilicifolia — California evergreen Cherry—A native shrub with lovely glossy foliage, prickly and resembling English holly.

Fine hedge plant. Slow grower. Each 50c PYRACANTHA — crenulata — Chinese evergreen Hawthorne—Growth compact, branches slender, leaves long, narrow and glossy. New growth very ruddy. The earliest red berry bearing shrub as it colors up in late Summer.

Very desirable and attractive. Gal. cans 75c OUINCE—Japanese Flowering—Fine, glossy foliage, beautiful red wax-like flowers.

Price each \$1.00

SALVIA—leucantha—Low growing shrub with narrow pointed leaves covered with white down, the white flowers surrounded with Price, each 50c; doz. \$5.00 purple calyx.

Salvia Pitcherii-Rich gentian-blue.

Each 50c; doz. \$5.00

SPANISH BROOM-spartium junceum-The green branches have little if any foliage but are covered with bright yellow fragrant flowers in season. One of the most useful and beautiful shrubs, succeeding in any location. Price, 12 to 18 inch, each 35c; 2 to 3 ft., 75c

SPIREA VAN **HOUTE** — Graceful shrubs covered with white flowers in the early Spring. Price each 75c

VERONICA—speciosa imperialis—Is a good grower, of spreading habit, reaching a height of six feet. The broad dark green leaves have purple margins and mid rib. The flower spikes are amaranth red. Price each 50c

# ORNAMENTAL and SHADE TREES

Write for prices on such items as are not priced in this list

### PALM TREES

Phoenix — Canariensis — The Canary Island Palm-Makes a slow start but once established grows rapidly to a height of 40 or 50 feet. Requires plenty of room, good soil and moisture.

Prices: In gal. cans, \$1.50; Jap tubs, \$2.00 Large Plants, \$4.50 to \$6.00 each

### PEPPER TREE

Schinus-Molle-The Pepper Tree of California, introduced from Mexico. A general favorite with its shapely spread, graceful habit, beautiful clusters of bright red berries. The fine foliage is aromatic and of a lovely shade of gray green. Susceptible to frost and the berries are not so beautiful in the cooler sections.

Prices: 1 to 3 ft., 40c; 3 to 6 ft., \$1.00

### ORNAMENTAL AND SHADE TREES—Continued

Prices 1 to 3 feet, each \$0.40 (in gal. 3 to 5 feet, each .75 cans

- A.—baileyana—Makes a rapid growth, good specimens attaining a height of 25 to 30 feet. Leaves finely divided, feathery and intensely glaucous. The racemes of deep rich yellow flowers are borne very early and abundantly.
- -mollissima Makes a large tree, 40 to 50 feet, with such a wealth of bright yellow fragrant racemes of flower as to almost hide the foliage, which is feathery and ranges from silvery to green. A very popular variety.
- **A.**—verticillata—Makes a very distinctive small shrub-like tree. The leaves are whorled, slender and dark green. Flowers are in light yellow dense spikes or catkins.

### GIWKGO

G.-biloba-Maiden Hair Tree, so called on account of its foliage. Makes an attractive, interesting specimen. Price each \$1.00

### **LABURNAM**

LABURNAM—Golden Chain—Small graceful tree covered with golden wistaria-like flowers. Price each 75c to \$1.00

### QUERCUS—Oak

Q. chrysolepsis—The majestic and beautiful native live oak so dear to all Californians. Given good soil and moisture it quickly developes into a splendid tree.

Price, 4 to 5 feet, \$1.00 each

### BIRCH

BIRCH—European—Very graceful, attractive trees of weeping habit. White bark.

Price each \$1.25

### CHESTNUT

CHESTNUT-Red Flowering-Shapely, quick Price each \$1.50 growing.

#### HAWTHORNE

HAWTHORNE—Double Red—Beautiful ornamental trees covered with bright red flowers in Spring. Price each \$1.25

### MULBERRY

MULBERRY—Russian—Quick growing, make a fine shade tree. Price each 75c to \$1.00

#### PRUNUS

P.—pissardi—Deep reddish bronze foliage. Very ornamental. Price each \$1.00

### POPLAR

POPLAR—Carolina—Hardy, quick growing. Price each \$1.00

### EUCALYPTUS

EUCALYPTUS —ficifolia —Red Flowering — The most beautiful of the Eucalyptus, the bright scarlet or crimson flowers in great clusters form a brilliant contrast to the rich dark green foliage. The large, leathery leaves are pointed with wavy margins. The tree makes a slower growth and does not attain the size of other Eucalyptus varieties.

Price, 1 to 3 feet, \$1.00 to \$2.00

EUCALYPTUS—Blue Gum—See Windbreaks, page 15.

### GREVILLEA

GREVILLEA—robusta—Silk Oak—Makes a rapid growth, developing into a fine ornamental tree, the fernlike foliage and odd orange colored sweet scented flowers making an attractive display. Is drouth resistant but susceptible to frost injury and long slender limbs should be pruned back to prevent damage by heavy wind.

Prices, in gal, can, 2 to 3 ft., 75c; 3 to 4 ft. each \$1.00.

### **TAMARISK**

- T.—africana—Early, free blooming. Slender, graceful habit; minute foliage. The dainty pink flowers cover the tree. Price each \$1.00
- T.—hispida—Growth slender and upright; minute foliage. The small pink flowers are borne in profusion in Spring and again in late Summer. Price each \$1.00

### **EVERGREENS—Conifers**

### FIR-Abies

A. nordmanniana—Foliage is glossy dark green on the upper surface, silvery gray below. The new growth forms a pleasing constrast on the tips against the dark green of the old. Makes a symmetrical busy growth as the branches are spreading, developing slowly into one of the largest finest firs.

### PINE

Pinus—Radiata—Monterey Pine—Our native pine of Central California. Of upright habit and very rapid growth. The most beautiful tree of its class.

Prices: 2 to 3 ft., each 60c, 4 to 6 ft., \$1.50

### CEDAR—Cedrus

C. atlantica-Mt. Atlas Cedar-Large pyramidal open tree, very hardy.

C. atlantica glauca—Blue Mt. Atlas Cedar— With intensely silvery or glaucous leaves. Early growth is irregular but the tree soon developes into a symmetrical compact growth. A beautiful specimen tree.

C. deodora—Indian Cedar—One of the most beautiful cedars, of graceful drooping habit, open pyramidal form. Thrives splendidly in

California.

C. deodora verticillata glauca—This variety has glaucous or light blue foliage, retaining its color at all times. The growth is a little more upright than the Indian Cedar.

### **EVERGREENS—Conifers—**Continued

### CYPRESS—Cupressus

- C. arizonica—Arizona Cypress—Of compact, erect growth with red bark and brilliant silvery blue foliage.
- **C. sempervirens fastigiata**—Italian Cypress—Slender, tall, compact, columnar tree, very effective in landscaping.
- C. lawsoniana—Graceful and beautiful, dark green foliage; branches horizontal and slightly pendulous.
- Monterey Cypress—See page 15 for description and illustration; also cut on this page.

#### SPRUCE-Picea

- P. englemanni—Englemann Spruce—Splendid tree of pyramidal form; slender branches, bluegreen foliage. Very aromatic.
- P. orientalis—Oriental Spruce—Has the same color as Norway Spruce but is more slender and compact. Grows slowly but is a graceful and beautiful tree suitable to small grounds.
- P. pungens kosteriana—Koster's Blue Spruce— Of compact habit and beautiful silvery foliage.

### JUNIPER—Juniperus

- These well known evergreens are of slow growth but make symmetrical attractive specimens for permanent plantings.
- J. communis hibernica—Irish Juniper—Slender, dense, erect growth, glaucous foliage. A beautiful and useful evergreen.
  Each \$3.00 to \$4.00
- J. chinensis procumbens—Creeping Japanese
  Juniper—A dwarf trailing variety with dense
  glaucous foliage. Each \$3.00 to \$4.00
- J. excelsa—Greek Juniper—Very ornamental and distinctive, the leaves being grayishwhite, green underneath. Each \$2.00 to \$3.00

### YEW-Taxus

- T. baccata fastigiata—Irish Yew—Makes an upright, compact, deep green column. The foliage being very dark. Bears bright red berries.
- T. baccata fastigiata variegata—Variegated Irish Yew—Of the same habit and form as the Irish Yew but in the Spring the foliage is a bright golden yellow becoming lighter as the season advances. Makes a rare and beautiful specimen.

### **SEQUOIA**

THESE remarkable trees are native to California and are found no place else in the world, and their longevity, immense size and rare beauty easily make them one of the world's wonders. The young trees thrive splendidly when transplanted and soon develop into magnificent specimens. There are but two species of this genus.

S. gigantea—California Big Tree—Makes an erect, vigorous, symmetrical growth, the branches being abundant from the ground up when planted separately as a lawn specimen. If in close groups the branches will be carried higher up, leaving the lower trunk free.

Prices, 3 to 4 feet, \$2.00

S. sempervirens—California Redwood—Habit of growth is more slender and open than the "gigantea" and foliage is broader. Grows equally as well and the stately beauty of the Redwood makes it unrivaled for landscape groupings or avenues.

Prices, 3 to 4 feet, each \$1.50

Natural
Growth of
Monterey
Cypress
as a
Windbreak.
Dense,
Spreading,
Enduring—
There is no
Finer
Evergreen.
See Page 15



### WIND BREAKS

THE importance and value of windbreaks in some of the open sections of our state can hardly be measured, as a suitable windbreak will often transform a windswept waste into a veritable Garden of Eden, softening the temperature and protecting the plantings in a manner that is truly

amazing, greatly increasing the production and value. **Eucalyptus—globulus—Blue** Gum—Eucalyptus makes one of the best windbreaks and is extensively planted owing to its rapid growth and great value as a shade and ornamental tree. The hardwood is also very valuable both for fuel and commercial purposes and it is important that plantings be encouraged. They grow to a great size in a few years and if cut down, throw out new growth and develop quickly.

Eucalyptus—globulus compacta—Of low branching habit, spreading out at the top of the ground. Foliage is dense and growth rapid. Makes one of the best hedges or windbreaks for any

purpose.

Monterey Cypress Trimmed. Making a Solid Wall of Great Beauty that is a Permanent and Effective Windbreak



Monterey Cypress—c. macrocarpa—California's famous native Cypress. Makes one of the most desirable and ornamental hedges and is a most effective and satisfactory windbreak, making a very rapid dense growth. Can be trimmed for formal effects but if allowed to develop in its natural way has great beauty. See page 14. Prices, in flats, 100, \$4.00; 1000, \$35.00



Mallow hedge two years old

Mallow — This quick growing, drouth resistant plant makes an effective windbreak in a very short time as it will grow from seed to a height of 6 to 8 feet the first year. Has luxuriant foliage and blooms freely. Useful around the home grounds but should not be depended upon for large fields or orchard protection. Prices, in flats, 100, \$2.00; 1000, \$12.00.

## ROSES

Strong 2-year-old Plants All Roses 75c each, except where noted



**Golden Ophelia**—Soft pink, with golden suffusion. A rare novelty.

Hadley (H. T.)—Rich, crimson scarlet with deeper shadings. Flowers of splendid form. Fragrant.

Hoosier Beauty (H. T.)—Long well formed buds, large full fragrant flower. Color intense crimson scarlet.

**Hugh Dickson** (H. P.)—Deep, rich crimson scarlet, large and fragrant.

Irish Elegance (S)—Buds orange scarlet, opening to golden bronze. Bronze foliage.

**Irish Fireflame** (S.)—Buds are of rich deep orange with crimson suffusion opening to orange crimson.

Kaiserin Augusta Victoria (H. T.)—Large pointed buds. Creamy white. Fragrant.

Killarney Brilliant (H. T.)—Deeper, more brilliant pink, also more double than Killarney.

**Killarney Double White** (H. T.)—Pure white, very lasting.

La France (H. T.)—Beautiful silvery pink with pale lilac shading. Fragrant.

**Lady Battersea** (H. T.)—Deep cherry crimson, shaded orange. Buds long and pointed.

**Lady Hillingdon** (T.)—Splendid apricot yellow. Buds long and pointed. Foliage luxuriant.

**Austrian Copper**—Single, produces clusters of rich, reddish-copper flowers.

**Betty** (H.T.)—Fine long buds, brilliant copperyrose with golden suffusion.

Columbia (H. T.)—New; bright rose pink with dark rich green foliage. Strong grower, blooming freely. Ideal for garden or cut flowers. This rose has been awarded the Gold Medal by the American Rose Society and International Rose Test Gardens at Portland.

**Countess of Gosford** (H. T.)—Fine salmon pink, shading to yellow at base of petals.

Frau Karl Druschki (H. P.)—Pure white flowers of perfect form. Vigorous. Free blooming.

General McArthur (H. T.)—A splendid garden sort of vigorous growth, branching freely. Blooms are of medium size on strong stems, very fragrant. Color intense crimson scarlet. Foliage rich glossy green.

**Geo. Arends (Pink Druschki)** (H. P.)—Bright, clear pink flowers. Very fragrant.

Geo. Dickson (H. T.)—Large, blackish crimson. Lighter veinings on back of petals. Fragrant.

Los Angeles (Pern.)—Flame pink with coral suffusion, shading to gold at base of petals. Keeps well, fine foliage. Price each \$1.00

**Lyon** (Pern.)—Large coral buds; flowers of shrimp pink, shaded salmon and gold.

**Mad. Abel Chantenay** (H. T)—Clear, brilliant pink flushed carmin; fine foliage.

Mad. Caroline Testout (H. T.)—Bright, deep pink flowers, large and full. Free blooming.

Mad. Cecil Brunner (Poly.)—The "Baby" rose. Small dainty buds in clusters of ten or twelve. Color deep salmon pink, shading lighter.

**Mad. Cecil Brunner**—White. Same as the Pink except for color.

Mad. Edward Herriot (Pern.)—Long pointed buds; coral red, shaded rosy scarlet and yellow.

**Maman Cochet** (T.)—Pale pink with rose suffusion on outer petals.

**Maman Cochet White** (T.)—Identical with Maman Cochet except color, creamy white.

Mrs. Aaron Ward (H. T.)—Rich deep golden orange. Buds beautifully cupped

Papa Gontier (T.)—Bright cherry red. Good buds.

**Richmond** (H. T.)—Deep red flowers of splendid form.

**Souv. de Pierre Notting** (T.)—Elegant long buds. Orange yellow, marked carmine.

Sunburst (H. T.)—Rich yellow, shading to orange at center. Elongated form. Foliage bronze.

Ulrich Brunner (H. P.)—Large, rich crimson.

## **CLIMBING ROSES**

Lady Gay and "Thousand Beauties" are two of the best climbing roses for central California-Strong, rapid growers, responding readily to cultivation. The dense luxuriant foliage being quickly covered with a mass of bloom. In the coast section they will flower heavily three or four times a year. For quickly covering old fences, barns and unsightly buildings they are not excelled by any other vine.

### Each 75c except where noted

Beauty of Glazenwood (Gold of Ophir)—Coppery, suffused with fawn and salmon. Blooms freely.

Cli. Belle Siebrecht—Large, well formed flowers of rich solid pink.

**Cli. Cherokee Pink**—Immense saucer shaped single blossoms. Color light pink with golden anthers. Foliage deep rich green.

**Cli. Cecil Brunner** (Poly.)—Fairy Rose, beautiful pink, in clusters identical with the bush type.

Cli. Killarney—Same as the Pink Killarney.

Cli. Maman Cochet (Pink)—Flowers are identical with the bush rose.

Cli. Mad. Car. Testout—Large pink, identical with the bush type. Blooms through a long season.

Cli. Richmond—A good red. Identical with the bush. Price \$1.25

**Cli. Safrano** (**Reve d'Or**)—Very hardy and free blooming. Color apricot yellow.

Cli. Sunburst—A splendid pillar rose, blooming profusely. Flowers golden orange. Price \$1.25
 Cli. Papa Gontier—Good pillar rose, intense cherry red.

Cli. White Cecil Brunner (Poly.)—Identica with Pink Cecil Brunner except in color.

Gainsborough—Hardy, lovely shell pink. Free blooming, desirable.

Lady Gay (Poly.)—Vigorous climber. Bright rose pink flowers.

Silver Moon—Immense semi-double flowers produced in clusters. Color white with bright yellow anthers. The leathery foliage is rich bronzy green. Very distinctive.



**Tausendschon**—Thousand Beauties (Poly.)— Very hardy, rapid grower, producing clusters of delicate soft pink flowers.

### **CLIMBING VINES**

Clematis—has a wide range of usefulness, the large flowering type being of great beauty and easy culture. The well known Clematis Paniculata is one of the most satisfactory vines where quick growth and dense foliage are desired. Perfectly hardy in all climates. Care should be used in planting not to allow any fertilizing material to come in direct contact with the roots.

C. paniculata—Remarkably hardy vine of very rapid growth with dense glossy green foliage and panicles of small white fragrant flowers. Blooms late Summer and Fall. Price 75c

C.—Large Flowering Jackmannii—Attractive large purple flowers. Price each \$1.50

C. montana—Anemone-like snow-white flowers. Is hardy, strong growing, early profuse bloomer.
Price 75c

C. montana rubens—Same as White except red flowering. Price 75c

Jasmine—Dainty twining vines carrying small fragrant flowers. The yellow flowered sort blooms in early spring while the white variety comes later. Price 75c

Mattress Vine—muehlenbeckia—An evergreen vine of twining habit. The numerous wire-like shoots resemble the stem of the Maiden Hair Fern and are covered with finely cut foliage. Small white flowers. Price 50c

Ampelopsis veitchii—Boston Ivy—Glossy rich green, abundant foliage turning red in Autumn. Has blue berries. The most useful ivy for stone or brick, clings to any surface. Perfectly hardy everywhere. Price 75c

A. quinquifolia—Virginia Creeper—Native to eastern U. S. A rapid climber with luxuriant foliage turning to bright red in early fall. Purole berries.

Price 75c

Wistaria—Chinensis early—Multijuga later— Strong plants. Each \$1.50 Hop Vines. Each 15c, doz. \$1.00

## FLOWERING PLANTS

A NNUAL AND PERENNIAL FLOWERING PLANTS for garden display, porch boxes or cut flowers for the home, are inexpensive, require little care and will add much to the beauty of your home. We offer fine large plants that will flower freely.

### Price 35c per dozen, except where noted

**Acroclinium**—Everlasting flowers, pink and white.

Anchusa Italica (*Dropmore*)—An early summer plant of vigorous, branching habit making a graceful and pleasing display. The rich blue shades make it specially valuable, there never being an over-abundance of this color. Of easy culture. 3 to 5 ft. Large plants.

Each 25c; \$2.50 doz.

**Antirrhinum** (*Snapdragon*)—Mixed colors. **Aquilegia** (*Columbine*)—Choice long spurred.

Seedlings 10c each, \$1.00 doz.
Large field clumps 25c each, \$2.50 doz.

African Golden Daisy (Dimorphotheca) — Bright and showy. Splendid for warm exposures.

**Asters**—Early summer and late varieties assorted. Pink, white, purple, rose, lavender.

**Calendula** (*Pot Marigold*) — Showy free-flowering annuals. Rich yellow shades.

**Calliopsis**—Bright, free-flowering annual 1 to 2 feet high. Colors yellow marked with deep reds or browns.

Carnations—Pink and white. Each 25c, doz. \$2.50

Campanula Percisifolia (Peach Bells)—Blue or white.

Each 15c, doz. \$1.50 Centaurea (Bachelor Button)—Imperialis, white and lavender.

Cinerarias in pots. Each 25c, doz. \$2.50 In flats, per doz. \$1.00.

Clarkia—Double. Crimson, white, pink, assorted.

Coreopsis—Rich golden yellow, long blooming period. Splendid for cutting, easily grown 2 to 3 feet. Large clumps.

Each 25c, doz. \$2.50

Cosmos-Double, pink, white and red.

Daisy—Double red. New English importation Doz. 50c

**Delphinium**—Belladonna, Blue. The most desirable variety blooming more freely and continuously than any other sort, from early summer until frost. Clear, dainty, turquoise blue, of rare beauty. **Seedlings, each 10c; strong clumps, each 25c** 

D. bellamosum—A dark blue form of Belladonna identical in every way except the coloring is rich blue of great intensity.

Seedlings, each 10c; strong clumps, each 25c

Digitalis (Foxglove)—In flats.
Strong clumps.

Each 10c; doz. \$1.00
Each 25c; doz. \$2.50

Doronicum—Beautiful large yellow flowers formed like Marguerites. Early Spring. Splendid cut. Each 25c; doz. \$2.50

Gaillardia—Flowers a lovely combination of yellow, brown, orange and crimson shades. Continuous bloomer. Each 10c, doz. \$1.00

Geum—One of our most charming and useful perennials. Flowers are double, dark rich crimson; blooms freely and continuously.

Each 25c, doz. \$2.50

**Helichrysum** (*Straw Flower*)—Assorted colors.

Heucheria—Dainty coral flowers on long stems for rockery, cutting or borders.

Divisions, each 10c; doz. \$1.00

Field Clumps, each 25c; doz. \$2.50 Heliotrope—Dark blue. From 4-in. pots, 50c

Marigolds—Dwarf French. Large African, Orange Prince (Tall). Lemon Queen (Tall).

**Nigella** (*Love in Mist*)—Blue and white.

Paeonies—Should be planted freely. Thrive everywhere and have few enemies or diseases. We offer fine varieties in red, pink, white.

Each 25c

Penstemon—Hardy perennial. Fine spikes of Gloxinia-like flowers in brilliant colors. 2 feet. Each 15c; doz. \$1.50
Petunias—Large flowering, ruffled. Each 10c; doz. \$1.00

Pyrethrum—Pink and crimson.

In pots, each 25c; doz. \$2.50
Large field clumps.

Each 50c; doz. \$5.00



Delphinium

### FLOWERING PLANTS—Continued

Price 35c per dozen, except where noted

Salpiglossis—Free and continuous bloomer. Flowers of velvety texture in shades of purple,

gold, crimson, rose and white.

Salvia Splendens (Scarlet Sage). Scabiosa-Lavender, blue or white.

Schizanthus (Wisetoniensis)—White and rose.

Shasta Daisy—Divisions. Each 10c; doz. \$1.00

Stocks-Pink, white, lavender.

Verbena-Pink, white, red.

Pansy Plants—Large Flowering—In full bloom at all seasons. In splendid color assortment. Per doz. 50c

Asparagus Sprengerii—Well known asparagus fern. The long graceful bright green fronds make a very attractive plant for pots, boxes or Fine Plants, 25c to 50c Hanging Baskets, each \$1.50

Asparagus Plumosus-Fine decorative plant for pots or cutting. Each 25c to 50c Viola—Blue and yellow. Doz. 50c Zinnia—Large new dahlia-flowered types in splendid mixture.

Thalictrum (Dipterocarpum)—A recent introduction of rare beauty. The dainty flowers are lilac with delicate pink suffusion, the prominent yellow stamens and anthers forming a charming contrast of colors. A vigorous grower, 4 to 5 ft., perfectly hardy and free flowering. Blooms late summer and early fall. Good clumps.

Each 25c, doz. \$2.50. 2-year Clumps 50c

Gypsophila — "Baby Breath" — Dainty annuals. Nice plants. Pink or white. Doz. 35c Gypsophila—Perennial—White.

Field clumps, each 35c Genista—Free blooming, yellow flowers. favorite pot plant; also grows well outside in mild location.

Bleeding Heart-Dicentra-Perennial, low growing with sprays of rose colored heartshaped flowers. Strong plants, each \$1.00

### CHRYSANTHEMUMS Price per doz. \$1.00

White Turner—Of remarkable size, blossoms often 10 to 12 inches across. Pure white incurved, globular, perfect shape. Stems 4 to 5 feet long. Strong grower; good keeper after cutting.

Yellow Turner — Resembles Mrs. Turner. Beautiful, bright canary yellow. Large blooms on long stems. Incurved, globular.

Pink Chieftain—Large globular blossom, incurved, beautiful dark foliage and stiff stems. Choicest incurving silvery pink grown.

White Chieftain—Pure white sport of Pink Chieftain, and fully as good. Large globular blossom, incurved, with fine dark foliage.

Major Bonnaffon—Rich, incurved, canary yellow. An abundant bloomer. Flowers grow to immense size with long stems.

Chrysolora—Yellow, commercial variety, comes between Major Bonnaffon and Col. Appleton.

Janet—Good rose color, large.

Mrs. Hunter—Beautiful incurved. Petals rich, dark lilac. Reverse very light lilac. Immense size; good keeper.

### MISCELLANEOUS FLOWERING BULBS

Amaryllis belladonna—The flower stalk shoots up to a height of about two feet, producing a cluster of beautiful pink lily-like flowers. Fragrant. Per doz. \$1.50

Begonias—Tuberous Rooted—We grow a very fine assortment in wonderful colors and shades. Fine for pot plants, beds or borders. Prefer partial shade

Price, Single Mixed, each 30c, doz. \$3.00

Narcissus Grandiflora (Paper White)—For early Winter flowering in pots and forcing. Our California grown stock is unusually fine. Per doz. 60c, 100 \$4.00

Watsonia alba—Attractive flowers resembling Gladioli, blooming from June to late Summer. The flower spikes grow 3 to 4 feet high. Free blooming. Prefer sunny location. Per doz., 50c; 100, \$3.00

Daffodils—We grow many splendid named varieties which we offer in mixture. Fine large bulbs. Per doz. 60c, 100 \$4.00

### GLADIOLI

**America**—One of the best for bedding or forcing. Color soft shell pink. Each 7c, doz. 75c

Halley—Beautiful salmon pink, lower petals marked with carmine, gold suffusion. Flowers yery large. Each 7c, doz. 75c

Lily White-Magnificent new white.

Each 15c, doz. \$1.50

Mrs. Francis King-Fine straight spikes of Each 7c, doz. 75c light scarlet.

Mrs. Frank Pendleton—Immense flowers of lovely salmon-pink. Lower petals blotched Each 12c, doz. \$1.25 with red.

Niagara-Very large, light yellow, carmine blotch in throat. Each 10c, doz. \$1.00 Panama—A beautiful deep pink. Very fine for cutting or bedding. Each 7c, doz. 75c for cutting or bedding.

Peace—Color white with lilac throat. Flower very large. Each 10c, doz. \$1.00

Pink Perfection—Fine large flowers. Delicate bright pink, large spikes. Each 15c, doz. \$1.50 Prince of Wales—Beautiful salmon pink, of

Each 20c, doz. \$2.00 large size. Schwaben-Lovely bright yellow. Very free Each 15c, doz. \$1.50 flowering.

War-Fine, deep blood red, with darker shadings. Spikes long and straight.

Each 15c, doz. \$1.50 Mixed Gladioli—Hyde's Mixture—Fine named Per doz. 60c varieties.



## LOGANBERRY

THE LOGANBERRY was originated by Judge Logan of Santa Cruz, right in our own county,

**1** and we take great pride in the quality of our stock.

Loganberries are larger and longer than Blackberries, are dark red in color, are rich, juicy and of a characteristic flavor between a Raspberry and Blackberry. The fruit is borne in great clusters and is famous for its juice and jams. The growth is very rapid and vigorous, if handled right will bear for many years.

Their short life in some sections is due to disease and is easily controlled. We can tell you how.

Price, tips, 10, 75c; 100, \$5.00

Logan Transplants—It has been the general practice to plant the tips, but as they are very tender and easily damaged in handling and killed by a little exposure to air or sun, we have provided a splendid stock of transplants. They are large, well rooted, dormant, and can be handled with less risk of injury or loss, and will make a wonderful growth. They cost a little more than tips but are worth every cent of it.

Price, large transplants, 10, \$1.00; 100, \$8.50

### The "PHENOMENAL" Berry

"Phenomenal" is a great improvement over the Logan, being larger, brighter red, sweeter and richer, has a distinctive raspberry flavor. The berries are broader at the top, tapering more to the point than the Logan. Where Logans and "Phenomenals" are growing under the same conditions the "Phenomenal" outyields and brings a better price than Logan.

Price, Transplants, 10, \$1.50; 100, \$12.00



### GIANT EVERBEARING RED RASPBERRIES

A genuine novelty of the greatest merit, having been awarded medals and certificates of merit by the leading horticultural societies of America

The berries are the size of a half dollar, have very few seeds, are firm and of the finest quality, maintaining their size and delicious flavor throughout the season from July until frost. Wonderfully yigorous and productive; multiplies rapidly. Hardy everywhere, the strong, erect growth reaching height of 8 or 9 feet and have fewer thorns than any other raspberry.

Price, Fine Plants, 50c each; 100, \$40.00



## BUSH BERRIES







Logan

Phenomenal

Cory Thornless Blackberry

### CORY THORNLESS BLACKBERRY (See Front Cover)

Outyields and Outclasses All Other Blackberries

Discovered by Martin Muehli in Tuolumne County, 1909, a single cane on a Mammoth Blackberry. After several attempts, W. C. Cory, who later rented the place, succeeded in propagating this wonderful berry that bears his name.

Cory Thornless—Often measuring  $2\frac{1}{2}$  inches in length. Has a small core and is almost seedless. The flavor is like the wild berry, but they are richer and sweeter than other blackberries, yet are acid enough to make the finest of jelly. They are very early and bear enormously through a long season. Firmer than Mammoth and costs less to pick and prune.

Our growing tests of every thornless variety on the market, proved "Cory" the only one of value.

### BLACKBERRIES

Macatawa—This new everbearing blackberry is a bush type requiring no support. The fruit is uniformly large, very sweet and firm, with few seeds, and no core. Stands handling and shipping. A good canning variety. Season is early, fruiting in April and continuing until frost. Each 15c; 100, \$10.00; 1000, \$65.00

Improved Lawton—Large, almost round, coalblack, with a rich luscious flavor and sweetness that makes it a great favorite. Has stocky, vigorous habit, with abundant five-fingered foliage. Yields heavily every year and is extremely hardy and disease resistant.

Price, 10, \$1.50; 100, \$10.00

**Lawton**—The standard commercial variety, large, heavy yielding and of good quality.

Price, 10, \$1.00; 100, \$7.00

**Mammoth**—Very early and productive. The large, luscious berries have a small core and few seeds, but are not good shippers.

Price, 10, \$1.00; 100, \$7.50

Himalaya—One of the most profitable and dependable berries, bears heavily and continuously. Hardy everywhere.

Price, 10, \$1.00; 100, \$7.50

### GOOSEBERRIES

Oregon Champion—Fruit pale green. Very large and sweet. Bears heavily.

Price, 10, \$1.50; 100, \$12.00

### **CURRANTS**

Perfection—Fruit bright red. Sub-acid flavor. Bears heavily. Price, 10, \$1.50; 100, \$12.00

Cherry—Deep red; fruit large, fine for preserves also splendid market sort.

Price, 10, \$1.50; 100, \$12.00

### RASPBERRIES

The varieties we offer have been tested under our personal supervision and are recommended as the best in their class.

Superlative—Large, bright red, firm berries, of the finest quality, vigorous and heavy yielding.

Price, 10, \$1.00; 100, \$7.50

California Surprise—A dependable commercial variety that produces choice berries in great clusters through a long season.

Price, 10, \$1.00; 100, \$7.50

Price, 10, \$1.50; 100, \$12.50

Cuthbert—Deep, rich red, large berries of excellent quality. The standard for commercial or home use. Price, 10, 75c; 100, \$5.00

Ranaree—This splendid new raspberry is 3 weeks earlier than other sorts and bears heavily until frost. The large, fine flavored, red berries are good shippers. We have tested it carefully and can recommend it for this section.

Price, 10, \$1.00; 100, \$7.50

St. Regis—The standard everbearing variety. Berries large, of excellent quality; bears early and continuously. Price, 10, 75c; 100, \$5.50

Black Raspberry—Standard varieties.
Price, 10, \$1.00; 100, \$7.50

### DEWBERRIES

Of trailing habit, bearing early and freely, making them profitable for commercial growing. We offer two standard varieties, one fruiting ahead of the other, prolonging the picking season.

**Lucretia**—Fine sweet berry, no hard core. A little earlier than Gardena.

Price, 10, \$1.00; 100, \$7.50

**Gardena**—Large, firm delicious berries for early market. Trailing habit.

Price, 10, \$1.00; 100, \$7.50

Hyde's

Select

from

one-vear

mother

blants

that are not allowed

to fruit. They have

vigor,

vitality.

longevity

Plants are grown

# **STRAWBERRIES**

TRAWBERRIES are a great specialty with us as we are not only interested in commercial production but have grown and supplied planting stock to many of the largest, most successful growers during the past sixteen

years and have been closely associated with the development of the berry growing industry in Central California.

This section has the longest known fruiting season, extending over a period of eight months, therefore the variety must be carefully chosen and the plants must have the vigor and vitality to maintain their growth and keep up the yield and size throughout this long season.

Hyde's Northern Grown Plants have successfully met these exacting requirements as has been demonstrated by the plant growth, fruiting and sales records of Oak Grove Berry Farm—one hundred and forty acres, all of which is planted to Hyde's Strains of Northern Grown Plants. The growth was clean, uniform, of great vigor and the production has been exceptionally heavy, many individual acres producing over 350 chests each weighing 72 lbs. net., and the quality of the fruit is such that it consistently commands from \$1.00 to \$5.00 per chest above the market.

Mr. J. E. Reiter, of Mayfield, holds the record for production, 35,000 lbs. per acre, 1919 crop, grown from Hyde's select strain of "Banner" plants.

If you are a strawberry grower you should safeguard your investment by planting only proven strains of varieties that are known to be commercially successful in your section.

The cool growing conditions and the dormant season in the northern sections where Hyde's Select Strawberry Plants are produced for the California grower and the methods of propagation insure the maximum production and great longevity. This has been demonstrated repeatedly in the cash returns from the fruit crops and the years that the plants have continued in bearing.

### Culture of Strawberries

THE VARIATION in soils, climate and moisture are such that no fixed rules can be given, but our experience enables us to advise the most profitable methods and best varieties for California. The following suggestions apply generally and special recommendations will be made on request. The matted row system is used by the commercial growers. A 26-inch bed with a double row of plants alternating with a 26-inch irrigating ditch. The first year enough runners are allowed to set to fill up the bed. This method requires from 12 to 15 thousand plants per acre.

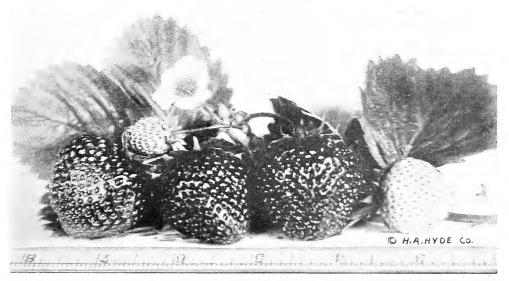
Strawberry plantings last from three to six years according to soil and variety, the "Banner" being the longest lived. Where plants are set early, during December, a good crop is produced the first year. After the first year the production runs from seven to seventeen tons per acre. The heaviest yield recorded being from Hyde's Improved Banner.



Oak Grove Berry Farm—140 Acres Famous from the Pacific to the Atlantic for the uniformity and sup

## HYDE'S BANNER STRAWBERRIES

Our's is the original strain and holds the world's record for production. 35,000 Pounds per Acre 1919 Crop



"We picked over 5000 chests, 70 lbs. net, from 10 acres from Hyde's best strain of 'Banners'
1919 crop."—J. E. Reiter, Mayfield.

THE Genuine Banner Strawberry excels in every desirable quality all other known varieties, and from the date of its introduction in 1899 received instant recognition from commercial growers wherever distributed, maintaining its position as the most profitable and satisfactory market variety to date.

The great beauty, delicious flavor and sweetness, rich dark glossy red color, uniform size, firmness and keeping qualities have made "Banner" in big demand in every market at top prices.

The growth is vigorous and upright, the strong erect plant bearing very early and abundantly, and is practically immune to disease and pests.

Under proper conditions three crops a season can be grown, 30,000 lbs. per acre, and "Banner"

bears 2 years longer than other sorts.

The planting stock was carefully controlled for many years and the demand was so insistent that many substitutes have been sold for "Banner." The true stock is still scarce and planters should protect themselves by purchasing from reliable authorized distributors only.

Price, 100, \$2.00; 1000, \$15.00

Our Hyde's Banner plants are sold in sealed crates, bearing the originator's guarantee.

We will be pleased to give complete information on varieties, cost of planting, watering, development work, harvesting, yield per acre, or any other detail that our long experience has made known to us. You should take advantage of this free service.



r excellence of its Strawberries. Marketed in Car Lots as Far East as Chicago and New York.

## HYDE'S SELECT STRAWBERRIES



Hyde's Nick Ohmer, on account of its finish and keeping qualities, is a favorite shipping variety

Hyde's Nick Ohmer-An ideal market variety, early heavy cropper, the bright red berries color evenly and hold their finish and size through a long season, and appear immune to disease. Nick Ohmer is one of the few Eastern introductions that have made good under California con-Its early bearing, heavy yield and the splendid keeping qualities make it profitable To be sure of the true variety, buy direct from us. Price, 100, \$1.75; 1000, \$15.00

New Oregon—One of the most profitable varieties for California growers. Large, deep, glossy red, of the finest flavor. Bears early and heavy, keeps and ships well.

Price, 100, \$1.50; 1000, \$10.00 Marshall-A firm, red berry, good keeper and one of the standard commercial varieties. Can be planted on adobe soil with good results.

Price, 100, \$1.50; 1000, \$10.00

Magoon—For home gardens. Fine, large, sweet berries, deep red clear through. Bears heavily and continuously through a long season.

Price, 100, \$1.50; 1000, \$10.00 **Progressive**—Everbearing. The best of this Large, rich red berries of the finest class. quality. Good for home gardens.

Price, 100, \$2.50; 1000, \$20.00

### SPRAYS FOR STRAWBERRIES

First application to be made in February just before the new crowns begin to grow, 4 pounds Black Leaf 40, 15 gallons Lime sulphur to 200 gallons water. Apply 300 gallons per acre. Second application about the middle of April, 2 pounds Black Leaf 40, 1½ gallons distillate emulsion, 6 pounds mill sulphur to 200 gallons water. Application, 500 gallons per acre. If still troubled with red spider and green aphis later in the season, about June 1st, use dry spray, 10% Nico Dust, 90% lime. Add to the above 10% dusting sulphur. If during the fruiting season use the liquid spray given above, containing the distillate emulsion, as the dry spray affects the pickers' hands.

If troubled with thrip during the hot weather, spray with 4 lbs. Black Leaf 40, one quart lime sulphur, 2 lbs. Ortho Spreader to 200 gals, of water.

We controlled our entire strawberry fields of over 100 acres with these sprays last season and were not seriously troubled with one discusses.

troubled with any diseases. 

It is of the utmost importance that the stock for large commercial plantings be of a uniform type and true to variety.

An uneven development, a variation in the size and coloration of the fruit, difference in the bearing period and longevity, all prove costly to the grower.

We offer you the advantage of securing your planting stock from large acreages of selected strains that have proven their uniformity and commercial value.

Avoid purchasing from sources that assemble your order from many different growers.

# Berry Baskets and Crates

THE EATON TRAY is the package we have used with such splendid success on our famous Oak Grove Berry Farm, and the sales records show that berries in Eaton Trays always bring the highest prices and arrive on the markets in better condition than when packed in any other container.



Tin Top Berry Baskets in the Eaton Ventilated Crate—The deep ones for strawberries the shallow ones for bush fruits—both fit the standard chest, or the trays can be safely shipped anywhere without the heavy expensive chest.



12-ounce Basket for Strawberries

## Tin Top Berry Baskets

The neatest, strongest, most attractive berry basket ever devised. Specially made for California growers. They will not check or warp in the sun-nest closeand used with the Eaton Ventilated Crates makes the best package for central California, meeting all requirements of the state laws.



8-ounce Basket for Bush Berries

These baskets in the Eaton Trays make possible safe shipment to markets as far distant as Chicago and New York.

The rabbeted ends of the Eaton Trays make it easy to cleat 6 or 8 firmly together. A cover is then placed on the top tray, making the most serviceable, economical and attractive package.

The commission houses return the empty trays and new ones can be purchased at all points in the berry growing districts.

The Baskets are used extensively in Chests with the regular slides, the only change necessary being a slight increase in the size of the chest and slide.

Is also used in the "Los Angeles Shipping Crate," holding 15 baskets.

Write us in season and we will quote you on your requirements, as prices for 1923 cannot be established in time to publish in this catalog.

## VEGETABLE SEED

We are located in one of the best seed growing sections of California and while we do not grow an extensive line, we produce a few fine specialties for the trade and our own use, and are prepared to grow to order any standard variety.



THIS is the famous Sweet Spanish Onion reported to have come from Valencia, Spain. A large straw-colored round onion, slightly flattened at the top and bottom, of beautiful finish, uniform type and a quality unsurpassed. After maturity the pungency leaves them and their mild fine flavor, crispness and large size up to a pound or more always command a premium over the market. They are quite resistant to disease and yield enormously, records of 16 tons per acre being reported. We grow this onion for the seed trade and are prepared to quote dealers or grow to their order.

"Sweet Spanish" is a splendid novelty every seedsman should list.

Price, packets 10c, ounce 50c, pound \$5.00



#### BURBANK TOMATO

Originator's description: "Fruit bright crimson; thick, solid, heavy, smooth, firm, medium to large in size, superior quality, unusually heavy and continuous bearer throughout the season; good keeper and shipper." The "Burbank" has one other unique and most remarkable quality which will be appreciated by those who like fresh sliced tomatoes for the table. Unlike other tomatoes, the skin peels freely from the rich, firm flesh.

We heartily endorse the above after five years' observation and growing of this variety in Oregon and California and will add that it is early, disease resistant, and very prolific, bearing its fruits in great clusters, see cut.

We are growing a large acreage for fancy fresh fruit market and seed, and also have a seed plot at the home place for selection and perpetuation of this splendid tomato.

Price, packets 10c, oz. \$1.00, \( \frac{1}{4} \) lb. \$3.00

The seed of Burbank Tomato is very scarce and dealers should have their requirements grown to order. We have the stock established and can serve you.

### VEGETABLE SEEDS

Price, packets 10c each

If wanted in larger amounts send us your list—we will quote you promptly.

**Beans** 

Golden Wax Kentucky Wonder Stringless Green Pod

**Beets** 

Early Blood Turnip Crosby's Egyptian Detroit Dark Red

Cabbage

Copenhagen Market Early Jersey Wakefield

Carrots

Chantenav Danver's Half Long Improved Short White Oxheart

Cauliflower

Early Snowball

San Jose Canner

New Stone

Chard Lucullus Swiss

Corn

Early Mammoth Hyde's Golden Sugar Stowell's Evergreen

Cucumber

Arlington White Spine Boston Pickling

Lettuce

Log Angeles Market Iceberg Hanson

Mangels

Golden Tankard Mammoth Long Red

Parsnip

Hollow Crown

Peas

American Wonder Laxtonian Little Marvel Telephone Tall Yorkshire Hero

Ruta Baga

American Purple Top

Spinach

Bloomsdale Prickley

Squash

Hubbard Early White Bush Scallop Yellow Crookneck

Turnip

Purple Top Orange Jelly

### VEGETABLE PLANTS

All Transplanted, Well Rooted Stock. Standard Varieties for Home and Market 15c per doz.; Flats, 150 plants, \$1.50 per flat, except where noted

**Tomatoes** 

Cabbage

Early Drumhead Ponderosa (Beef Steak) Late Autumn King Copenhagen Market

Early Burbank Tomato—Ripens early, bears freely, unexcelled for home or market. We have fine sturdy plants for seasonable delivery. Cauliflower Early Snowball Kale, Cow or Thousand Headed

**Peppers** 

Doz. 25c, Flat \$2.50

Bell or Bullnose Cavenne

Pimiento Mexican Chili

Note-10c each will be allowed for flats returned.

### RHUBARB ROOTS

Crimson Winter—Best of the Winter rhubarbs. Each 20c, doz. \$2.00

Riverside Giant—A wonderful new hardy rhubarb of the finest quality, also outyields all other varieties either in the open ground or for forcing.

Each 20c, doz. \$2.00

### ARTICHOKE

Purple Burbank Green Globe

Each 20c, doz. \$2.00

### HORSE RADISH

Roots, each 10c; doz. 75c

#### ASPARAGUS

Palmetto.

Doz. 50c, 100 \$2.50

We can supply any of the above in almost unlimited numbers and will grow to your order.

"Riverside Giant" Rhubarb, Plants 1 year Field of old, grown by A. R. Cummings, originator

Large buyers write for prices.

## SWEET PEAS

**S** WEET PEAS, with their lovely waved and fluted flowers, exquisite coloring, freedom of bloom and ease of culture, are universal favorites.

We are in the best producing section and grow a select list for our own trade.

Per packet 10c, per oz. 35c

**Apple Blossom Spencer**—Rich rose standard-Wings primrose with rose suffusion.

**Asta Ohn**—Large, lovely, lavender, pink suffusion.

**Countess Spencer**—Dainty, light pink, deeper shading at edge. The original Spencer type.

**Illuminator**—Glowing orange scarlet, tinged cerise. Very distinct.

**King Edward Spencer**—Large, rich crimson scarlet. Long stems. Best red Spencer.

**King White**—The best pure white. Flowers of enormous size, beautifully frilled.

**Margaret Atlee**—Cream ground overlaid with soft pink. Finest of the duplex types.

**Wedgewood**—True blue shade with silvery , tinge. Free from purple shading.

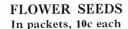
Hyde's Mixture—Choice varieties.

Per packet 10c, oz. 25c



One of our seed fields of "King White,"

We are prepared to grow Sweet Peas to your order, any variety or amount.



Asters
Candytyft
Centaurea
Clarkia
Coreopsis
Cosmos

Eschscholtzia Godetia Marigold—Tall Marigold—Dwarf Nasturtiums—Tall Nasturtiums—Dwarf Poppy Salpiglossis Scabiosa Schizanthus Snapdragon Stocks Zinnias

We have a good assortment of the above varieties in packets and will be glad to quote on larger amounts, and other varieties on request.

### GRASSES AND CLOVERS

All Prices F. O. B. Watsonville—Subject to Change Without Notice On Large Orders Write for Special Quotation

### CALIFORNIA LAWNS

WELL KEPT LAWN adds so much to the value and beauty of your home grounds that special attention should be given to the thorough preparation of the soil before planting. This will to be dobe, add sharp sand.

Well rotted manure is valuable in the first preparation as it furnishes the humus necessary. After preparing the seed bed, give it a good watering. This brings up the weeds. They should

be pulled or hoed out and this process repeated two or three times.

Do not spade up the ground or hoe it before planting after the weeds are worked out. In Central California the grass can be sown from September to November and March to May. Never use stable manure for dressing a lawn, it brings weeds and trouble. A good dressing of Hyde's Lawn Fertilizer is much more efficient and economical, sustaining the growth and color.

#### HYDE'S LAWN MIXTURE

The most satisfactory combination of grasses for our local conditions. Makes a good lasting turf. One pound sows 250 sq. ft.

Per lb. 50c, 10 lbs. \$4.00 ALFALFA-Hairy Peruvian-Recommended as being very hardy and having a long growing season. Extra Choice, lb. 40c, 10 lbs. \$3.50 ALFALFA—Chilean—This is the variety in general use in central and southern California. FANCY KENTUCKY BLUE GRASS

Kentucky Blue Grass makes a very fine perma-Per lb. 75c, 10 lbs. \$7.00 nent lawn. WHITE CLOVER—Extra Choice.

Per lb. \$1.00, 10 lbs. \$9.00

PURPLE VETCH

We are large growers of this seed used extensively as a cover crop by the citrus growers of Southern California, and are prepared to grow to order in any amount. Prices and information on request.

### **FERTILIZERS**

The value of commercial fertilizers in improving the crop and increasing the yield makes their use a sound investment. We are prepared to quote and deliver in any amount and can advise what is best for the various crop requirements and soil conditions in this section.

HYDE'S GARDEN FERTILIZER-A complete general fertilizer for garden use.

Price, 50 lbs, \$1.50; 100 lbs., \$2.50

Extra Choice, lb. 40c, 10 lbs. \$3.50

SPECIAL LAWN FERTILIZER-A great aid in establishing new lawns and a dependable restorative for old lawns.

Price, 10 lbs. 75c, 25 lbs. \$1.75, 50 lbs. \$3.25

### NUMBER OF TREES TO THE ACRE

The following are considered standard in our State:

Distance :	apart each way
Apricots	24 to 30 feet
Standard Apples	25 to 30 feet
Standard Pears	24 to 30 feet
Dwarf Pear	12 to 15 feet
Strong-growing Cherries	24 to 30 feet
Duke and Morello Cherries	18 to 24 feet
Standard Plums and Prunes	24 to 30 feet
Peaches and Nectarines	24 to 30 feet
Quinces	15 to 20 feet
Figs	30 to 40 feet
Olives	30 to 35 feet
Citrus Trees	22 to 30 feet

	Distance apart each way	ļ
Grapes	6x6, 6x12 and 8x10 fee	t

### DISTANCES FOR CANE FRUITS These may vary with conditions

Plants per acre Cory Thornless Blackberry 6x9 ft. 806 Improved Lawton 4x9 ft. 1200 8x10 ft. Himalaya 544 Loganberry 6x8 ft. 777 2420 Raspberry 3x6 ft. For Strawberries see Page 22.

These figures are given for large plantings—for one acre or less see rules below.

Rule Square Method-Multiply the distance in feet between the rows by the distance the plants are apart in the rows; this gives the number of square feet for each plant or hill; divided into the number of feet in an acre (43,560) gives the number of plants or trees to an acre.

Rule Hexagonal Method—Divide the number required to the acre "square method" by the

decimal .866. The result will be number of plants required to the acre by hexagonal planting.

### TREE PROTECTORS

For sunburn, borers, rabbits, mechanical injuries, etc.use "Expan" Tree Protectors.

These are very inexpensive and lasting, as they will not check and fall to pieces like veneer. The galvanized wires that hold them in place pass entirely around the outside, keeping them firmly in place. The 14-inch is a very satisfactory size for young trees.

"EXPAN" TREE PROTECTORS-Made from heavy parafined paper with wires for attaching.

		Weight per		Price per			Weight per		Price per
Length	Width	100	100	1000	Length	Width	100	100	1000
12 inches	7 inches	4½ lbs.	\$1.50	\$11.25	24 inches	7 inches		2.25	18.50
14 "	7	5 lbs.	1.75	12.50	36 ''	7	13 lbs.	3.50	28.50
18	7	6½ lbs	2.00	15.00					

## CALLA LILIES



Field of Godfrey Callas on the Home Grounds, Watsonville

4HE GODFREY CALLA, an English production, is one of several seedlings from a cross of Little Gem and Aethiopica. During the introduction, the growers in Jersey and Guernsey sold numbers of seedlings for Godfrey's, thus confusing and discrediting the stock.

It required several years at great expense for us to select and establish the right type and get it on a commercial basis, but we now grow and cure the highest grade stock possible to produce.

The Yellow Calla Elliotiani

The true Godfrey properly grown is superior in color, being pure milk white; also in texture and general refinement, and is more floriferous than Aethiopica. The stems are as long and as strong but more slender, giving a more graceful effect. Properly benched gives extra large flowers but is at its best in 6 to 8 inch pots where blooms of medium size are freely borne.

We dig in late August and bulbs should be potted or benched on arrival. An inch or one and one-quarter inch Godfrey should be potted in four-inch pots and kept dark until well rooted. Soil rich in humus and retentive of moisture should They are gross feeders and will respond profitably to bone meal and liquid manure and can be brought along to six-inch pots or three bulbs to an eight-inch pot makes a fine showing. Carnation temperature with a light bench near the glass is best.

Prices of Godfrey Callas: 1 inch to 11/4 inch, doz., \$1.50; 100, \$11.00.  $1\frac{1}{4}$  inch to  $1\frac{1}{2}$  inch, doz., \$2.00; 100, \$14.00.  $1\frac{1}{2}$  inch and up, doz., \$3.50; 100, \$25.00.

### CALLA AETHIOPICA

This old favorite needs no description, is in big demand, and the stock we grow is unexcelled.

Prices and Sizes:  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inch, doz., \$1.25; 100, \$8.00.  $1\frac{1}{2}$  to  $1\frac{3}{4}$  inch., doz., \$1.50; 100, \$12.00.  $1\frac{3}{4}$  to 2 inch, doz.,

\$2.50; 100, \$16.00.

### CALLA ELLIOTIANA

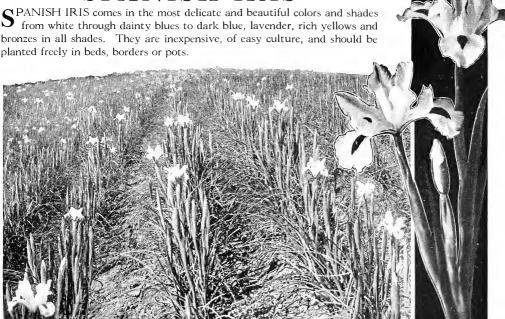
The favorite with florists and the finest yellow Calla, growing to perfection under ordinary pot culture. Treated same as white Callas. Flowers are a rich golden yellow. Very lasting; foliage beautiful deep green, spotted silvery white.

Prices and Sizes: 1½ to 2 inch, doz., \$3.00; 100, \$20.00. 2 to

 $2\frac{1}{2}$  inch, doz., \$3.50; 100, \$25.00.

16 years in the best Calla growing section of California have taught us how to grow, cure, and pack Callas to insure best results to Florists. Dealers and Florists write for prices. We will grow to your order.

## SPANISH IRIS



Field of White Spanish Iris "Snowball" on the home grounds, Watsonville

We grow Spanish Iris to the greatest perfection and in splendid assortment for our wholesale florist trade, the bulbs produced being far superior in size and quality to the Holland stock and are ready for delivery much earlier.

Many varieties force splendidly and easily when properly grown and handled, using Carnation temperatures for forcing, and planting promptly on arrival. They should not be held late. By permission of the U. S. Dept. of Agriculture we have added to our stocks for propagation

By permission of the U. S. Dept. of Agriculture we have added to our stocks for propagation a very complete collection of the most desirable varieties and types of Spanish, Dutch, and various other Iris, also the newer sorts of forcing Gladioli from the most reliable Holland growers.



Our New Iris "Liberty" (pallida type)

### PRICES OF SPANISH IRIS

	Doz.	100
Named varieties	\$ .60	\$4.00
Mixed	40	3.00

### IRIS TINGITANA

This wonderful blue forcing Iris from the South of France requires special treatment for successful flowering. We grow it to perfection, big, solid properly cured bulbs that our customers report flower fully 90%.

Prices and Information on Request

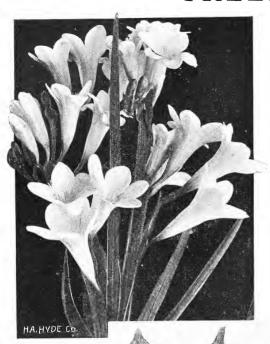
# OUR NEW IRIS "LIBERTY" (pallida type)

A magnificent bright azure blue Iris of rare beauty. Very vigorous and free flowering. 3 to 5 feet, carrying 8 to 12 flowers on each stalk. A sport from "Juniati" propagated by our Mr. Hyde. Has been officially recognized as a novelty of great merit.

Price, each 20c, doz. \$2.00, 100 \$12.00

Dealers and Florists—Write for quotations on Iris, Callas, Freesias, etc.

## FREESIAS



THE dainty, pure white fragrant flowers of Freesia "Purity" are borne in clusters, are of good substance and very lasting. Planted in succession in late summer or early fall indoors, can be had in flower through the winter months. This is the universal favorite of the flower shops.

Freesias also come in many charming colors and shades of yellow, pink, lavender, which we list as our "Rainbow Mixture."

The past two seasons have been disastrous to the Freesia crop owing to the unprecedented severity of the winters. To protect our plantings if possible from future conditions of this kind we have purchased what we believe to be an ideal sheltered location with good soil and drainage and are now establishing our plantings and equipment for 1923 crop.

We specialize in the production of high grade Freesia Bulbs for the wholesale trade and are prepared to grow any number to your order or quote you on your requirements in season.

Below-

### Note Our Sizes

 $^{1}/_{2}$  to  $^{5}/_{8}$  in.  $^{5}/_{8}$  to  $^{3}/_{4}$  in.  $^{3}/_{4}$  to  $^{7}/_{8}$  in.  $^{7}/_{8}$  in. up.

### Do not be misled

by listings
"up to ½ inch"
"up to 5% inch"

The figures are larger than the bulbs.

Our ½ inch to 5% inch goes through the 5% inch gauge but are larger than the ½ inch. This system applies to all sizes. For this reason our "½ inch" is a grade above those listed as "up to ½ inch." So it is "up to you" to know the size you buy.

### PRICES

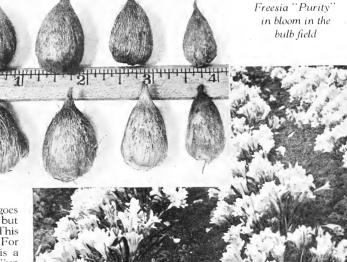
Freesia "Purity"—

Per doz. 30c Per 100 \$2.00

Rainbow Mixture — all shades and colors.

Per doz. 50c Per 100 \$3.00

Prices and sizes to dealers and growers on request





# OUTCH BULBS







HYACINTHS, TULIPS, DAFFODILS and CROCUS come in many charming colors and types. Of rare beauty, exquisite fragrance and the easiest culture, they are sure to thrive and bloom freely, whether planted outside or for winter blooming indoors.

HYACINTHS

Dutch Roman or Miniature Hyacinths-Dainty single flowering Hyacinths, blooming early and freely. Splendid for pot culture or Prices, doz. 75c, 100 \$5.00 in boxes.

HYACINTHS—Early Single Prices, each 15c, doz. \$1.50, 100 \$10.00 La Victoire—Large fine flower, brilliant red. Forces early

Gertrude—Bright, rosy pink. Splendid forcer. Queen of Pinks-Large, compact spike of bright rosy pink.

La Grandesse—Snow white, spike and bells of finest form.

Queen of the Blues-Large spikes of light blue with silvery suffusion. Splendid.

TULIPS—Early Single

Cramoisie Brilliant—Large brilliant red flower on long, erect stems. Good forcer.

Prices, doz. 75c, 100 \$5.00 Couleur Cardinal—Brilliant scarlet, bronze suffusion. Prices, doz. 75c, 100 \$5.00 Gold Finch—Golden yellow blooms, sweet scented. Easily forced.

Prices, doz. 75c, 100 \$4.50 Thomas Morus—The finest orange tulip for Prices, doz. 75c, 100 \$4.50 forcing Rose Grisdelin-Rose pink with lighter shadings; unsurpassed. Prices, doz. 75c, 100 \$4.50 Keizerskroon—Large flower of bright red with broad yellow edge. Excellent for beds and Prices, doz. 75c, 100 \$4.50 forcing. Gesneriana Spathulata — Dazzling scarlet. Fine for bedding and cutting.

Prices, doz. 75c, 100 \$5.00 Murillo, Early Double—Delicate blush pink. Fine forcing variety

Prices, doz. 65c, 100 \$4.00

DARWIN TULIPS

Clara Butt—Beautiful clear pink. Best of its Prices, doz. 75c, 100 \$4.50 class. **Europe**—Glowing salmon scarlet, shaded rose. Good forcing variety.

Prices, doz. 75c, 100 \$5.50 Farnscombe Sanders—Large broad petaled blooms of bright rose-scarlet. Splendid forcer. Best red Darwin. Prices, doz. 75c, 100 \$5.50

**Hippolite**—Blue-violet. Extra fine.

Prices, doz. 75c, 100 \$5.50 King Harold-Beautiful mahogany flowers of graceful form. Very lasting. Prices, doz. 75c, 100 \$5.00

### NARCISSI—DAFFODILS

Emperor—Deep primrose perianth with full yellow trumpet: Prices, doz. \$1.25, 100 \$7.50 Golden Spur—Perianth and trumpet deep rich

yellow Prices, doz. \$1.25, 100 \$7.50 Bicolor Empress—Snow-white perianth with rich yellow trumpet.

Prices, doz. \$1.25, 100 \$7.50 Barri Conspicuus—Broad perianth of soft Trumpet rather short with yellow shade. orange-scarlet edge.

Prices, doz. \$1.00, 100 \$6.50

Mrs. Langtry—Broad white perianth with large white cup edged bright yellow.

Prices, doz. \$1.00, 100 \$6.50 Poeticus Ornatus—Perianth pure white, yellow cup with deep red margins.

Prices, doz. \$1.00, 100 \$6.50

Van Sion—The old favorite double daffodil with perianth and trumpet of rich golden yellow. Prices, doz. \$1.00, 100 \$6.50 Jonquil — Campernelle Rugulosus — Single.

Large, rich yellow. Prices, doz. 60c, 100 \$4.00

King of the Whites-The largest pure white. Purpurea Grandiflora—Largest, bright purple. Prices, doz. 40c, 100 \$2.00 Prices, doz. 50c, 100 \$2.50 Mammoth Yellow-Fine large yellow. Lothair—Light lilac with purple stripes. Prices, doz. 40c, 100 \$2.00 Prices, doz. 50c, 100 \$2.50

# SEED POTATOES

ITH a full understanding of the importance of clean, true to name, uniform types of seed—free from disease, of strong vitality, varieties adapted to the different soils and climatic conditions of the potato growing sections of our State, we have been systematically working with our northern growers for years past, testing out our selections in trial plots in various sections of California and Nevada and the results of these years of improvement work are now a matter of undisputed commercial record.

This experimental work has eliminated many undesirable sorts and our select strains of standard varieties furnished to California growers have consistently given increased yields of shapely salable tubers.

Hyde's Low Top Burbank produced a record crop in a hundred acre field that was certified under the California law—240 acres in one field in the Stockton Delta, 1921, was pronounced by experts the best crop produced in years, and was sold on the table market at a big advance over current prices, being used for a fancy pack. This same strain proved a record producer on several other islands. One carload buyer has been rotating this strain since 1916, coming back for another car last season.

**Hyde's High Top Burbank**, the strain that won second prize at the Panama-Pacific Exposition for best acre yield, produced 200 sacks to the acre of smooth fancy tubers, 1921 crop, 100 acres near Watsonville.

**Hyde's Pride of Multnomah** is becoming a leader in many sections. The crop from one car planted on Rindge Island, 1918, went number one without sorting. This is the variety that won the first prize at the Panama Fair for the best acre yield.

**Hyde's American Wonders** are the result of 17 years of careful hill selection, a 40-acre field near Watsonville made a record yield and passed certification. In 1921 a large acreage on the Glide Ranch near Sacramento produced the heaviest crop ever grown in that section. Also gave fine results in the San Joaquin west of Fresno.

**Hyde's Garnet Chili**—Produced some of the largest, cleanest crops near Colma last season that had ever been grown in that section.

Hyde's British Queen, White Star, Earliest of All and Early Rose have all had years of careful hill selection and are leaders in their class.

Owing to mild climate and long growing season in California, potatoes are less resistant to disease and pests and replanted year after year soon deteriorate.

Growers interested in improving their stock or securing clean seed of strong vitality and having heavy yielding qualities may contract to have their seed grown in the North.

If interested in this important work, our Mr. H. A. Hyde will be very pleased to call in person at a seasonable time and demonstrate to your satisfaction the importance and value of this work to the potato growers of California.



"Garnets" growing near Colma—Hyde's Northern Grown Seed, 1921

# IMPROVING THE YIELD AND QUALITY

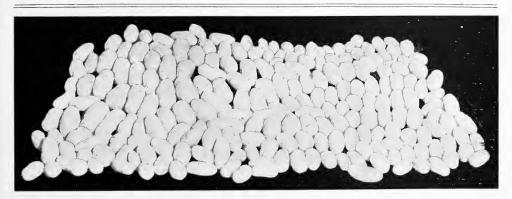
POTATOES are of such great economic importance as a food, give quick, sure cash returns and are so valuable in crop rotations that our experience as growers and the methods and recommendations of high authorities, which we have quoted, may be of interest and helpful to others at this critical time when there is a general awakening to the necessity for better cultural methods, standardization of crops and above all a systematic selection of seed.

The general practice throughout the country of selling the choice potatoes and planting the culls, no organized effort to combat potato diseases and the destructive insects, poor cultural methods and speculative marketing, have resulted in untold loss and confusion which, however, is being corrected by Growers' Associations and by the well-directed efforts of extension service men and we can hope for a wonderful increase in yield and value of the crop under improved methods of growing and standardizing varieties.

So much excellent literature on the potato, including the splendid new booklets of our State institutions, giving special information for various sections are now ready for distribution or in the hands of growers, that we will confine ourselves briefly to our own problems, the most harmful and prevalent diseases and pests—and descriptions of the varieties of potatoes that are in general cultivation on the Pacific Coast and have proven best for our markets and growers.

No radical departure in methods of growing has been used but the success of our efforts, covering a period of about 18 years, demonstrates the value and advantages of persistent, systematic work.

Special detailed information will always be cheerfully furnished on request and we will be glad to help you to improve the standard and yield of your crop.



Sixteen hills of American Wonder selected from 1916 crop by one of our growers who has practiced hill selection for 17 years on this variety. Note the uniform type and even size—No small or irregular tubers. These planted in four rows near a field of carefully selected seed from the same stock show a better growth; again proving the value of the best selections.

These select hills produced the seed stock for 1918, and the crop shown on the back cover was developed from this selection.

Quoting Cornell University— the results from tests of poor yielding strains of the same variety against the high yielding selections for five years—3 varieties—gives an average of 82 bushels per acre for the low yielding strains and 208 bushels for the high yielding strains.

Selections for type, color, shallow or deep eye, shape and like physical characteristics are also

transmitted.

# HYDE'S NORTHERN GROWN SEED POTATOES

Dependable varieties that have proven profitable to our commercial growers, having established themselves in the trade as the best of their class in the sections to which they are adapted and for the purposes for which they are grown. Prices, all varieties, per lb. 5c, 100 lbs. \$4.00, ton \$75.00

American Wonder

Large Buyers and Dealers Write for Prices 

There is no one best potato but there are many excellent sorts. some of which will prove more profitable and satisfactory for your purpose than others. In choosing, consider your soil conditions, market requirements, climate and seasons, and history of available seed stock.

American Wonder—One of the earliest and best main crop varieties. Strong grower, of branching habit and great producer. Tubers white, large and uniform in size; elongated and slightly compressed. Few eyes. Blooms white. Our American Wonder has had 17 years of careful hill selection and has given wonderful results in various sections of California. See 1921 seed field illustrated on back cover.

**British Queen**—White oval type. Planted in some sections for early use as they form quickly but grow through a long season. Our stock is from California certified seed, with the added advantage of five years of selection in the north and has given big yields when returned to California.

Burbank—Low Top—A standard commercial variety. Late and very productive. Skin smooth. Eyes rather shallow. Tubers long and slightly flattened. Under proper selection we have bred up a fine heavy yielding strain.

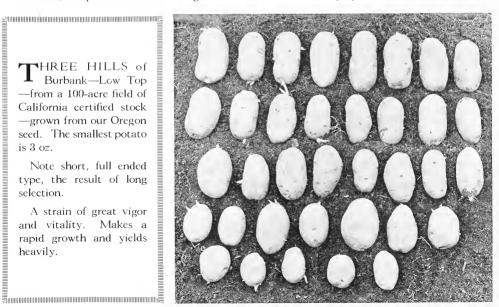
The illustration shows the type, short full ended, that is preferred by our growers and has consistently produced record crops of the finest quality in the potato growing districts of California. See picture on back cover of a 1921 seed field.

Burbank—High Top—A distinct strain of true "high top" obtained from the field near Watson-ville—won third prize for productiveness at the state contest in 1915—370 sacks of 120 lbs. each to the acre. Seed has been carefully grown in the north from this select stock. A field of 100 acres in this section produced over 200 bags to the acre of smooth, shapely tubers, season of 1921.

THREE HILLS of Burbank—Low Top -from a 100-acre field of California certified stock —grown from our Oregon seed. The smallest potato is 3 oz.

Note short, full ended type, the result of long selection.

A strain of great vigor and vitality. Makes a rapid growth and yields heavily.



**Table Potatoes**—We can supply your requirements for table stock of the finest grade, *Potatoes that are uniform*—that cook and look alike. The best way to secure this fancy stock at prices that are comparatively cheaper than the market run-owing to the fact that there is little waste-is to have it grown to your order and delivered in season. Tell us your requirements and we will quote you promptly.

### For Prices see Page 36

Earliest of All—A shallow eyed white skinned variety of vigorous growth not subject to blight or disease and does not make a second growth but will develop and be ready for use in 8 weeks from planting if growing conditions are favorable. Keeps as well as any late potato. Has shown up well in California and is the Earliest of All Early Potatoes.

Early Rose—Early pink, elongated tubers with shallow well marked eyes. Skin thin but tough. A vigorous grower. White flowered. Our strain of this grand "old timer" is exceptionally good.

Hyde's Queen—Has all the good points that make British Queen popular with the growers, but has the added advantage of quality. A smooth, oval white potato with shallow eyes. Fine grained and of excellent table quality. Does not boil to pieces and has no superior for baking.

**Hyde's Queen** is a strong grower and outyields most other sorts, including British Queen. Medium to late. Purple flower.

Do not confuse this variety with so-called Purple Blossom White Rose, or British Queen, as it excels them in every way.

White Star—Claimed to be a seedling of Excelsior crossed by White Peachblow. Medium early heavy producing variety of exceptionally strong, vigorous growth. Foliage dark green. Tubers oblong and large. Skin white with a minute russett netting. Adapted to strong bottom slough or foothill land. Our selected strain is from the Pajaro Valley stock built up by years of careful growing in the north, a heavy yielding variety of handsome uniform appearance.

Garnet Chili—A heavy yielding medium size late potato of roundish irregular form; deep eyes, blunt ends, skin red, flesh white, vines and leaves light green. Its growth is so vigorous and rapid that the young tubers form very early and stand handling and shipping better than other early varieties, hence its value to California growers.

Our strain of Garnets produced some of the heaviest crops, season of 1921, that were ever grown in the Colma section.

Pride of Multnomah—Burbank type. Blight and disease resistant to a remarkable extent. Heavy, vigorous growth. Unexcelled as a table potato. Won first prize for heaviest yield, 790 bu. per acre P. P. I. E. Gives the greatest per cent of salable tubers.

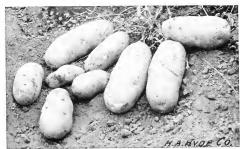
"Multnomah" is becoming a standard variety under California conditions wherever there is sufficient strength in the soil and the season is long. In 1918 a car of this stock planted by Mr. Rindge on his island in the Stockton Delta went as No. 1 without any tubers having been removed. It always shows a high percentage of smooth first class tubers. Our stock is grown by the originator.



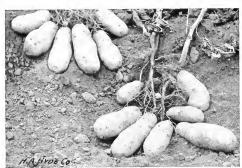
"Earliest of All"



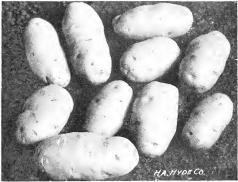
Hyde's Queen



White Star



High Top Burbank



Pride of Multnomah

# GROWING POTATOES

PREPARATION OF THE SOIL— Circular No. 161, "Potatoes in California" by Professor Gilmore of the University of California, gives briefly such sound advice on this subject that we quote his recommendations as follows: They

will apply in general to any potato growing district.

"PREPARATION—The importance of early and thorough preparation cannot be over emphasized. It is estimated that this procedure gives half the assurance of the crop. The land should be plowed as deeply as possible in the fall and allowed to remain rough during the winter, in order that it may be benefitted by the winter rains and weather. As early in the spring as possible it should be worked with disc and harrow as often as may be, in order to keep the surface in good condition and to destroy early germinating weeds. It is desirable that the interval between opening the furrows before planting and closing them afterward shall be as short as possible. In case the land cannot be plowed until spring it should be plowed deeply and worked frequently, in order to give it sufficient compactness to facilitate the distribution and retention of moisture.

SELECTION OF SEED-

The time and trouble necessary to get results from hill selection is comparatively small and insures large returns in increased yield and improved quality, better prices, more resistance to diseases and pests by increasing the vigor of the stock. The practice of selection is not urged for the production of new strains but very quick results are secured by the isolation of the established heavy yielding more uniform types that occur in seed stock of good average quality. The average yield from stock that has not been re-selected is held low by the inferior and weak strains. Their elimination gives good returns and amply repays for the extra labor. This elimination and selection can be carried on as far as the results justify.

The potatoes of equal appearance selected from the bin or pile may not produce the same general results, for the reason that the tendency is to reproduce the characteristics of the hill instead of the individual tuber, hence the selection of one good potato from an otherwise poor hill will not give the results that a potato of the same general appearance from a good heavy yielding hill. Small potatoes as a rule come from poor hills, and if planted will tend to produce small potatoes and poor hills. Careful selection should be continued from year to year to improve and maintain the standard as there is always a possibility that the good yielding strains will at times produce poor hills that can readily be thrown out if looked for but that otherwise will rapidly cut down yield and grade.

SEED TREATMENT-

Wetting several hours before treating adds to effectiveness of dip. Dipping either in a solution of Formaldehyde or one of Bi-Chloride of Mercury (Corrosive Sublimate) are the two methods generally recommended for treating seed potatoes, as follows:

Soak the potatoes in this solution for two hours and spread out to dry. This treatment is effective against Scab but it is not to be depended upon for Rhizoctonia.

Bi-chloride of Mercury solution is always recommended as it will do all that the Formaldehyde accomplishes and takes care of our most troublesome disease, Rhizoctonia. Bi-chloride of Mercury solution is prepared as follows, making a 1 to 1000 solution:

Bi-chloride of Mercury (Corrosive Sublimate) . . . . . . . . . . . 4 ounces Water......30 gallons

Soak the uncut potatoes in this solution from  $1\frac{1}{2}$  to 2 hours and dry before planting.

This solution rapidly deteriorates; to correct this, add a ½ oz. of Bichloride for every four bushels treated two hours. For this purpose make a stock solution of 1 oz. dissolved in two quarts of water; one quart added equals a half ounce.

SPECIAL NOTE—In dissolving the corrosive sublimate use a small amount of hot water, about a gallon, adding it to the cold water when it is dissolved as it will be impossible to get good

results by attempting to mix the entire amount in cold water.

WARNING—The poisonous nature and corrosive action of this solution makes it necessary to use care in handling and to keep the treated potatoes from stock or poultry. Any that are not used should be burned or buried. Make the solution in a wooden or porcelain container as it

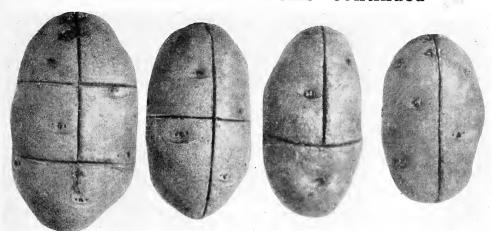
will corrode metals and rapidly lose its strength.

Both of these solutions lose strength through use or standing for any time and should be made up fresh and not more than four lots of potatoes dipped without renewing the solution. The dipping can be done in bags or crates but the potatoes should then be spread out to dry, care being taken not to re-infect them by using the same bags or containers or spreading them where they would again be in contact with untreated stock. Bags weaken the solution and potatoes should be emptied out into the dipping tank, then spread to "green."

# GREENING

After dipping the seed should go through the process of greening, leaving them spread in the light and warmth when the light will cause them to assume a greenish color and sprouting will begin. Sprouts brought on in this way will be short and thick and the potato will awaken from its dormant condition and develop much more vigor and vitality than potatoes that are not so treated. greening also is a big factor in eliminating fungus growth and diseases. Another very valuable result from greening is the time gained as the potatoes thus treated will germinate and develop very much earlier than they would otherwise.

# **GROWING POTATOES--continued**



Illustrating system of cutting tubers weighing from 4 to 12 ounces

# CUTTING THE SEED PIECES-

The illustration shows a practical method of cutting the seed pieces that greatly simplifies and facilitates this important operation, and, we believe, gives the best average results for field plantings. No time need be wasted in looking for eyes as they will be well distributed.

Using a stationary knife on a cutting board—see illustration of cutting table—one man can

cut 20 sacks a day, the pieces falling into sacks ready for the field.

Experience has shown that nothing less than the two ounce seed piece is satisfactory or profitable to plant and each piece should contain at least two good eyes and should be cut in a square or blocky shape, rather than thin and long. Since the strongest buds are near the bud end of the tuber the seed sets should be cut in a manner to include one or two of these strong buds on each piece. Experience is the only guide to efficiency and the cutting of seed is very important as it has much to do with the stand. There are mechanical cutters on the market but these are not generally recommended and there is much waste from pieces that do not possess strong eyes.

To insure against rotting in the ground, should the season or planting conditions be unfavorable, dusting the cut potatoes with IGypsum drys up and hardens the surface, insuring a better stand.

Other materials used for this purpose have not given the same satisfaction as Gypsum.

# STEM VERSUS SEED END-

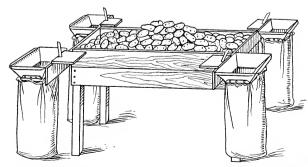
Comparison of the results in planting the basal (stem end) and the apical (seed end) of the tuber, quoting the Cornell University report of a five years' test of twenty-one (21) varieties.

"The average number of bushels per acre of potatoes was 150.4 for the apical or seed end and 132.4 for the basal ends, a difference of 27 bushels per acre in favor of the seed ends. It was also found that the potatoes from the seed end averaged a little larger and were more uniform than those

from the basal or stem end.'

As the central portion of the potato would more nearly approach the seed end in value as compared to the stem end, it is not profitable or practical to use only the seed ends when planting commercial crops, and we advocate the splitting of the seed end as the two pieces have a greater producing value than one whole end of the same weight and by the method shown above, cutting a generous stem end and splitting the seed end, the planting value of the pieces is more nearly equalized and an even stand insured.

A CUTTING TABLE to accommodate four cutters is readily arranged by hanging the sack holders on a board nailed at the ends of a sorting table. The knives are set in a saw cut in a little board as illustrated—nailed to the end piece. The potatoes are dumped on the rack and the operator picking one up notes the best position for cutting as he brings the tuber to bear against the stationary knife. The cut pieces fall into the sacks and a handful of Gypsum is dusted in on them occasionally and as they fill up they can be removed directly to the field. This is a very rapid and satisfactory way of cutting.



Cutting table for four men. Each man can easily cut 20 sacks a day by this method. Saves time and handling.

# **GROWING POTATOES--continued**

### PLANTING IN CALIFORNIA-

Quoting again from Professor Gilmore, Circular 161.

"If the soil is rich and deep, well drained and well prepared, potatoes may be planted as close as 12 in. in the row with rows 20 in. apart, but under usual soil conditions in California it seems best to plant from 12 in. to 14 in. in the row with rows 36 in. to 42 in. apart. In this manner the crop may be cultivated by horse labor. The wider distance is essential under conditions where soil is poor and the moisture supply inadequate.

The best depth under normal conditions is 4 in. to 5 in. If too deep the tubers will be small and of poor quality. If too shallow they will be of variable size, unshapely and often green by exposure to the light. In heavier soils the shallow depth may not be exceeded but in lighter soils the greater depth may be followed."

In the Coast regions of Southern California planting may begin in the early winter months, especially for crops that are designed for the early market. In most regions, however, planting may begin in early March and continue until June, the prospects for rich yields diminishing as the season advances. Second crop plantings are usually begun in late July or August. Early potatoes require from 70 to 90 days to mature a crop where the late varieties run from 130 to 150 days.

# CULTURE-

In deep, rich, well prepared soil, seasonably planted with well selected, properly cut stock, cultivation to conserve moisture and destroy weeds is all that need be done. It is good practice, however, to harrow lightly until the crop is well up as this keeps down the weeds and breaks the crust, conserving moisture. The first cultivation with the shovel plow can be deep and thorough. Thereafter two or three light cultivations not interfering with the root growth should be sufficient to insure the crop. Level cultivation is always recommended except under unusual conditions, high hilling or ridging only being practiced for the purpose of affording drainage under excessive moisture or where the crop is grown entirely by irrigation. Ridging is also sometimes necessary in combatting tuber moth.

The great advantage of thorough preparation of the seed bed before planting should never be overlooked as much can be done at this time to insure the crop against later adverse conditions. Care should be taken not to work the soil when too wet as this may result in a serious failure and may require a long time to get the ground in good condition again.

No standard rules for planting, cultivating or handling the crop can be made as each season and in each section conditions may vary and must be met by the grower's judgment and experience

# STORAGE-

Condition of storage controls the vigor and vitality of the seed and they are much more easily and safely protected in the north than in the mild climate of California.

The first most important consideration is temperature, 34 to 40 degrees being recommended as a result of tests by various authorities and at such temperature the fungi and bacteria, causing the various rots have their development retarded and may not cause trouble, where a higher temperature would result in serious loss.

Storage cellars should be kept clean, dry and well ventilated and should be disinfected prior to the storing of the crop. It is of the utmost importance that the potatoes be perfectly dry and cured and the immature, damaged and diseased or infested tubers culled out before being placed in storage, no matter what method of storage is used.

It is also necessary to cool before placing on storage at low temperature, allowing the latent heat to pass off, as the placing of freshly dug stock into the low storage temperature may cause much damage through overheating.

It is well to note here that the practice of piling potatoes up that are in sacks and allowing them to stand for any length of time has a tendency to destroy their vitality and reduce the germination. It also tends to develop Black Heart and Storage Rot.

# BLACK HEART-

A softening and blackening of the center of the tuber caused by a storage temperature of  $100^\circ$  to  $110^\circ$  from overheating, improper storage or allowing them to lay in the hot sun too long.

**Rotate**—It has been the experience of every potato growing section of the world that replanting on the same ground or too close a rotation results in disease becoming so prevalent that profitable yields could not be secured.

# **GROWING POTATOES**—Continued

STORAGE ROT-Fusarium Coeruleum-

This is the most common and troublesome tuber rot, a fungus that seems always present. Control measures are disinfection of storage houses and treatment before storing. Where storage



Storage Rot

temperature is low it is not troublesome but attacks the potatoes when handled and out of cold storage, any scratched, cut or bruised tubers being attacked.

The characteristic markings on the decayed portion easily identifies it and should never be mistaken for wilt or disease as wilt does not produce a tuber rot.

Care should be taken when cutting for planting to throw out affected tubers, and if cut to disinfect the knife as it is easily spread through the seed pieces, causing them to rot if growing conditions are not good.

# DISINFECTION OF CUTTING KNIVES

Each cutter should have an extra knife in a 10% solution of Formaldehyde. A glass fruit jar is a convenient container—should a diseased tuber be cut, the knife can be exchanged for the one in the solution. This prevents spreading disease to the healthy seed pieces.

POTATO LEAK—Quoting Dept. Bulletin 557-1917, Vol. 29-D, No. 41.—

This disease is caused by Pythium debaryanum and enters the tubers through wounds caused

at digging time. The result is a rapid decay and leaking with considerable odor.

It has been demonstrated that the leak can be controlled by elimination of all wounded tubers. In the first place avoid wounding the tubers, but all injured ones should be sorted out and shipped separately or stored for a week or two to allow the fungus to incubate, then resorted.

# DROP SEED

REMEMBER that small potatoes sorted from the average crop will contain many degenerate

seed and may prove very unprofitable for planting.

But small seed that have not attained their normal size on account of late planting—frost killing the vines, dry or unfavorable growing conditions, will often produce a splendid crop as it is a curious fact that immature seed produced under the above conditions or by mowing the vines just before they ripen and digging a few weeks later has given better yields than plantings from mature tubers. In sections where the tendency is for the seed piece to rot either on account of infection, un-

In sections where the tendency is for the seed piece to rot either on account of infection, unfavorable soil, temperature or moisture conditions, the planting of select whole tubers from two to four ounces often makes it possible to produce profitable crops where the planting of cut tubers would mean failure. This method is being employed in districts that have been ravaged by disease, for the upbuilding of their stock.

We produce stock for this purpose by close planting and can supply a limited amount each season, but as we only grow to order it is best to arrange for your requirements a year in advance.

# HOT FORMALIN TREATMENT FOR RHIZOCTONIA AND SCAB

If you have the equipment for heating the solution this is very effective and a great time saver.

Dr. J. E. Melhus worked out this hot formalin treatment while in the employ of the U. S. Dept. of Agriculture, working on potato diseases in Maine and other field stations. The cold formalin treatment is inefficient. The mercuric chloride is the standard treatment but is slow and poisonous. The hot formalin will not poison the potatoes and can be used in iron tanks or vessels of any

kind without injury. The solution also retains its strength and as it is used up can be replenished

The potatoes are soaked for two minutes in water at 120 degrees F., using one pint of formalin to every 15 gallons of water. The temperature must not go below 118 degrees nor above 122 degrees. The potatoes should be spread and covered with wet sacks for a short time after dipping. The experimental work on this method covered about six years.

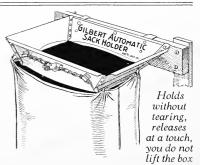
# Gilbert Automatic Sack Holder

If you handle potatoes, onions, grain, or anything that goes in bags, you need a Gilbert Sack Holder.

You can hang it on a fence, a wagon box, the wall or bin, the sorting table, or use a Gilbert Stand, with two holders.

When the planting season is on and time counts, you can double your cutting capacity by using a cutting table equipped with Gilbert Sack Solders. See page 39.

When you are grading out of a pit or cellar a Gilbert Sack Holder saves half the labor, and pays for itself many times over. **Try one. Price, each \$3.25** 



# POTATO DISEASES

N THIS CATALOG we can only take up in a general way some of the most harmful diseases and pests that are causing tremendous losses and are a serious menace to growers, but will be

glad to furnish more complete information on request.

There are so many conflicting opinions and so much misinformation that we feel justified in briefly presenting some of the authoritative findings confirmed by the research work of the United States Dept. of Agriculture and foreign investigators working on the same problems. Some of this information is new and we have quoted from *Journal of Agricultural Research*, Vol. XXI, No. 11, Sept., 1921, and Vol. XX, No. 4, Nov., 1920.

"Potato Diseases and Their Control" Station Bulletin No. 24, by M. B. McKay, associate pathologist of the Oregon Agricultural College, is the most recent, comprehensive and practical

treatise on this subject that has come to our attention. Anyone growing or handling potatoes

should write to the Oregon Agricultural College, Corvallis, Ore., for this bulletin.

Is widely distributed over the United States, undoubtedly causing more loss than any other one trouble and is readily recognized on affected seed by the little black patches on the surface of the potatoes that resemble particles of soil, but unlike soil cannot be readily removed. Referred to as "Black Scurf.

The new sprouts from the seed tuber are sometimes killed, resulting in missing hills. Young plants show a browning of the stalk and root, the underground portions often being dry and shriveled, extending above the surface.

Plants attacked later and not so badly affected, have many of their roots destroyed in various stages of development. Later injuries after the tubers are formed stop the growth, resulting in many small and imperfect potatoes, hence the name ``little potato`` disease. Little potatoes may form above the injury and on the plant.

Once established, a long rotation is needed for its control. Avoid badly affected seed and always use the corrosive sublimate dip as formaldehyde is not effective against this disease.

Rhizoctonia is favored by a heavy wet soil, soils having poor drainage and soils having an acid reaction. As the fungus attacks other plants these soils may contain so much Rhizoctonia that the crop would be ruined, as dipping only kills the infection on the tubers and will have no effect on the Rhizoctonia in the soil.

### Late Blight-

Is more serious than and differs from Early Blight. The fungus produces dark brown or black dead areas in the leaves, spreading rapidly and breaking down the leaf stalk and tender leaves. Warm, moist weather is favorable and in advanced stages the odor is very unpleasant. The tuber is also affected, showing sunken, darkened areas that later rot down in storage Spraying the growing crop with Bordeaux will prevent blight. Delaying the digging two or three weeks after the vines die and spraying the ground with copper sulphate solution will help to prevent infection of the soil and tubers. Spraying must be done before blight develops.

Early Blight-

Only the leaves are attacked by Early Blight. The dark spots or markings develop rings, giving the appearance of targets. If badly affected the foliage will be destroyed and the yield greatly reduced. Contrary to Late Blight, Early Blight develops in warm, dry weather. Spraying with Bordeaux will prevent.



From photograph of two adjoining hills in the same row, one with typical Rhizoctonia infection, the other normal and healthy. This is an impressive example of the loss caused by this ever present fungus.



Common Scab, easily controlled

# Common Scab-

Attacks the tuber only and may form a small spot or cover the entire tuber with groups of the characteristic rough, corky, brown patches. Scab also affects sugar beets and other crops that should be avoided in rotating. An alkaline soil is more favorable than an acid or neutral soil, hence ashes, lime, fresh manure, and wet poorly drained soils tend to increase scab.

Dipping in formaldehyde or corrosive sublimate and crop rotation are the control

measures.

# Powdery Scab-

Differs from Common Scab, the spots resembling a blister that has broken showing the torn skin around a raised pustule having a brownish powdery appearance. Infested tubers should never be planted as this disease is hard to control.

### Mosaic-

This disease is first indicated by a mottling of the foliage with yellowish light colored areas and a severe infection gives the plant a stiff erect appearance with thickened, crinkled or savoyed leaves, but they do not curl or roll up. A light attack may be unnoticed but seriously affects the yield, and tests have shown that a severe infection cuts the crop averages to less than half of normal production.

Mosaic is a most serious menace as the only control measure is careful rogueing and planting of disease free seed. There is absolutely no manifestation of this disease by which it could be identified in the tubers as they appear

perfectly normal.

Black Leg-

First manifests itself by the upward curling and drying of the plants and the black shriveled condition of the stem from above the ground to the seed piece which rapidly rots away.

Seed selection and treatment and destruction of the young plants are the control measures. All broken and bruised tubers should be discarded and the seed dipped, preferably in bi-chloride.

Jelly End-

Contrary to the general belief, Jelly End is not a disease transmitted through the seed stock, nor is it a wilt rot, as wilt diseases do not produce tuber rots. Experiments and observations of our best authorities has led to the belief that it is caused by a soil or moisture condition, and has no relation to the seed stock planted or crop rotation. While no control measures can be recommended it is believed that much of this rot can be avoided by maintaining an even and sufficient moisture supply during the growing season.

### Wilt-

If Wilt is in the soil or the seed stock, it manifests itself by a rapid wilting down of the plant as it comes into vigorous growth, the foliage turning brown and the plant soon dying. When established in the soil, six or seven years are required to eradicate it, if no host plants are grown upon the land. The remedial measures against this disease being rotation of crops and the choice of disease free seed.

We quote the following established conclusions in reference to the stem end or vascular discolorations of the tubers. It has been definitely determined that discarding the stem end in planting is no protection against wilt, as the apical or seed end also carries the infection if the disease is present.

"About 45% of tubers distinctly colored contained wilt or other disease producing organisms. 55% were apparently free though to all appearances the same as the others.

"Neither does the absence of discoloration prove the absence of wilt.

"The character of the discoloration is no guide to what fungus may be absent or present. "Wilt does not produce a specific tuber rot.

"There is no particular value in the attempt to avoid wilt by discarding the stem ends and planting only the eye ends of tubers suspected of containing wilt fungus.

"Careful official tests of 6 varieties using different portions of same tuber and whole tubers show no essential difference in the percentage of infection either in the plants produced or the yields obtained. The percentage of infection in the yields from the stem pieces being 22.7, from the eye pieces 24.6."

# TWO DESTRUCTIVE PESTS THAT CAUSE TREMENDOUS LOSSES

Eel Worm-Nematode-

Quoting from the circular on this pest, issued by the California Department of Agriculture: "Every grower in California should for his own protection familiarize himself with this pest which is a minute round worm almost invisible to the naked eye. It is a real menace to California agriculture." It causes the diseas known as beaded root knot, attacks potatoes, strawberries, garden crops, in fact about everything excepting grains and grasses. Once this pest is in your soil it is practically impossible to get rid of it and the loss and damage is enormous. Also depreciates land values.

You should plant only clean nursery stock or potatoes that have been inspected by your

horticultural commissioner.

Potatoes or potato peelings that are infested should be destroyed, never throw them on the ground or feed to stock as this may spread the pest. Only clean seed should be planted to prevent the spread of this pest.

Tuber Moth-

Widely distributed in the warmer sections. The egg is deposited on the leaf; the larvae as soon as hatched begins to work mining the leaves and stems, then entering the tuber at the eye. The most serious loss is caused by the damage to the tuber.



Infested with Eel Worm



Work of Tuber Moth

Deep planting, 5 to 6 inches, ridging the rows, and digging before the vines die, helps protect the tubers. Pick up every potato when digging; those left spread the moth. If crop not sold at once, fumigate before storing, using carbon bisulphide, 2 lbs. per 1000 cubic feet of storage space, closing tight for 48 hours. (Note—Carbon Bisulphide is very inflammable.)

# INSTRUCTIONS FOR PLANTING TREES

As soon as the trees are received, remove from the bales or boxes, and heel them in the ground, thoroughly settling water. This will insure the stock keeping in first class condition until ready to plant. When planting see that the As soon as the trees are received, remove from the bales or boxes, and neet them in the ground, thoroughly settling with water. This will insure the stock keeping in first class condition until ready to plant. When planting see that the holes are dug sufficiently large to admit the roots in natural form. All bruised or broken roots should be cut away to a smooth surface with a sharp knife. The tree should stand just a trifle deeper than it did in the nursery row. It is also important after planting an orchard to settle the earth around the roots by a liberal application of water. The cause of important after planting an orchard to settle the earth around the roots by a liberal application of water. The cause of trees failing to start in many instances is due to failure to settle the soil around the roots. All deciduous fruit trees should be cut back to within 18 to 30 inches from the top of the ground. Instead of removing all the lateral limbs when topping the tree, a sufficient number of these laterals should be left to form a head. Shorten in the laterals to within 2 inches of the body of the tree. The trees, as a general rule, have limbs removed while standing in the nursery rows to within 12 inches of the ground. It is also a good plan not to remove the lateral limbs entirely, so that in case the buds on the main body of the tree do not start in the Spring, the buds on the smaller branches will.

# FOR SOUR SAP OF FRUIT TREES

By L. Y. Leonard, Farm Adviser, Sacramento County

Sour sap injury is increased by the omission of the use of whitewash on the trunks of trees during winter. conditions contribute to this injury, such as low vitality due to insect or disease injury, draught followed by excessive rains, causing "wet feet"; late maturity of wood with its resultant low sugar concentration, or anything that lessens

rains, causing wet leet; late maturity of wood with its resultant low sugar concentration, or anything that lessens resistance to extremes of temperature.

During the Winter months, while the temperature of the air will be at about 32 degrees Fahrenheit or freezing, with the sun shining upon the trunk of the trees, the temperature just below the bark is many degrees higher. After sunset the sudden drop in temperature, followed the next day by a rise with a repeated drop, causes the injury.

One insurance against this is first to relieve the soil of all surplus water and whitewash the trunks of the trees in the Fall. This coat of whitewash reflects the rays of the sun and allows the trunk of the trees to remain more nearly the same as the surrounding air, thus reducing extremes in temperature.

### Two White Wash Formulae

Quick lime 5 pounds	Quick lime30 pounds
	Tallow 4 pounds
Sulphur <sup>1</sup> / <sub>4</sub> pound	Salt 5 pounds

Slake lime slowly and add salt and sulphur or tallow while it is boiling. Reduce with water to proper consistency and strain.

# DISEASES OF CANE FRUITS

Anthracnose of Blackberry, Raspberry, Loganberry, etc.

Anthracnose is a common trouble of certain varieties of cane fruits, and in most sections spraying for this disease will doubtless become a regular operation in connection with the growing of bush berries.

The disease attacks the canes, leaves and fruit. On the stems the disease causes spots of varying size and color, depending upon the variety attacked. The spots are pale in the center with irregular brown and black for, on the raspberry particularly, purple) margins. The spots are pair in the certical with integration and black (or, on the Paspers) particularly, purple) margins. The spots may run together, a characteristic appearance on canes of Loganberry, forming long irregular patches of diseased tissue. On the leaves small spots are produced with pale centers but with rather broad reddish or purple borders. On some varieties the disease area may drop out and give more or less of a shothole effect. On the fruits the druplets are found to be affected, the fungus spotting in the individual druplets. These may be attacked when about half ripe, or later. The disease on the fruit has been reported as particularly serious on the Blackberry and on the Loganberry.

# CAUSE

This disease is due to fungus which, growing in the tissue of the plant, produces the spotting described above. The fungus is reproduced in the spots by the formation of many minute spores, in a manner similar to that described for apple tree anthraenose. These spores are disseminated most abundantly by wind and rain. Under favorable conditions spores are produced in great numbers and the disease may spread rapidly over the fields. No winter stage has been recorded for this fungus, and it is probable that the summer spores stage may live over on the dead leaves or canes or in the spots on the living canes.

PREVENTION

Experience has shown that proper precautions in regard to sanitation have a very important bearing upon the control of this disease. All fruit canes should be removed as early as practicable after the fruit is picked. These should be removed from the field and burned, preferably before all leaves fall. In trimming out the patch in the Fall one should also prune out any seriously affected canes of the current year's growth. This might be delayed until early Spring on account of the danger of Winter injury, but if this is practiced then they should be protected, as suggested below, by a Fall application of spray. There seems to be considerable difference in the susceptibility of varieties to this disease, and where possible resistant varieties should be grown. The experience of investigators regarding spraying for this disease has not been uniformly successful, but three sprayings in the Spring will go far toward controlling this disease. Bordeaux mixture should be used in the 4-4-50 or 5-5-50 formula.

Spray before the leaves appear in the Spring, covering the canes thoroughly: spray again as coop as the leaves

should be used in the 4-4-50 or 5-5-50 formula.

Spray before the leaves appear in the Spring, covering the canes thoroughly; spray again as soon as the leaves are well out and the young shoots are about 6 inches in height; spray a third time just before the plant blossoms. Where loss due to infection in the fruit is experienced, it may be found desirable to spray when the fruit is half to three-fourths grown. In this case the use of some spray mixture such as the Ammonical Copper Carbonate or Burgundy mixture may be found advisable, since such sprays leave no deposit on the fruit. Where the disease is particularly serious and Spring spraying has not been particularly successful, an application of Bordeaux mixture about the middle of August or the first of September, before the Fall rains begin, might prove advisable, because it would doubtless prevent a large part of infection which occurs upon the canes and leaves in the Fall.

These spraying recommendations are suggestive rather than authoritative, as there is yet much to be leaved.

These spraying recommendations are suggestive rather than authoritative, as there is yet much to be learned.

## SPRAYS FOR BUSH BERRIES

### HIMALAYA

As control for the new disease which prevents the berries from turning black and ripening.

During the dormant winter period, 36 gallons Crude Oil Emulsion to 200 gallons water.

During March, before the leaves start, 2 pounds Black Leaf 40, 15 gallons lime sulphur

Just after the buds swell and start to grow, 2 pounds Black Leaf 40, 1 quart lime sulphur, 3 pounds mill sulphur.

In September, or when the vines are in good bloom, just a the petals begin to drop, a thorough spraying of 4 pounds

Black Leaf 40, 1 quart lime sulphur, 2 pounds Ortho Spreader to 200 gallons of water.

The above sprays have been found very beneficial in controlling this new destructive disease.

### LOGANS AND OTHER BUSH FRUITS

For Logans and other bush fruits, especially where affected with anthracnose, during the winter dormant period,

36 gallons crude oil emulsion to 200 gallons water.

Two sprays in the Spring at intervals of 30 days before the buds start

One after the buds swell and begin to grow, these two sprays of Bordeaux 5-5-50.

	INDEX	
A         Alfalfa       29         Almonds       10         Apples       2-3         Apricots       4         Artichokes       27         Asparagus Roots       27         B       Berry Boxes and Crates         25	G       Gladioli     19       Gooseberries     21       Grapes     9       Grasses     29       H       Hop Vines     17       Horseradish     27       Hyacinths     33	Plants—Vegetable
Blackberries       21         Boston Ivy       17         Bulbs       19 and 30-33         Bush Berries       20-21	I Irises31	Rhubarb 27 Roses 16–17  S Sack Holder 41
C         Calla Bulbs       30         Cherries       8         Clematis       17         Clover       29         Crab Apples       3         Creat Apples       3	Lawn Grass       29         Lemons       9         Loganberries       20         Loquat       9         M         Mallow       15	Sequoia       14         Shrubs       11-15         Spraying Information       24 and 44         Strawberries       22-24         Sweet Peas       28
Crysanthemums	N           Narcissi         33           Nectarines         4           Nut Trees         10	T
Dewberries21 <b>E</b>	Olives	Trees—Ornamental . 11-15 Tree Protectors
Evergreens13-14 Eucalyptus13 and 15	Oranges 9 Orangental Trees and	V
A Alfalfa 29 Almonds 10 Apples 2-3 Apricots 4 Artichokes 27 Asparagus Roots 27  B Berry Boxes and Crates 25 Blackberries 21 Boston Ivy 17 Bulbs 19 and 30-33 Bush Berries 20-21  C Calla Bulbs 30 Cherries 8 Clematis 17 Clover 29 Crab Apples 3 Crcus 31 Crysanthemums 13 Currants 21 Cypress 14 and 15  D Dewberries 21 E Evergreens 13-14 Eucalyptus 13 and 15 F Ferns 19 Fertilizers 29 Figs 9 Flower Seeds 28 Flowering Plants 18-19 Freesias 32 Fruit Trees 2-9 Fruit Diseases 44	Pansy Plants 19 Peaches 7 Pears 5 Pepper Trees 12 Persimmon 9 Phenomenal Berry 20 Planting Tables 29	Plants—Vegetable

Plants—Vegetable	
R         Raspberries       20-21         Red Woods       14         Rhubarb       27         Roses       16-17	
Sack Holder	
Strawberries	
Т	
Tcmatoes       26         Trees—Evergreen       13-14         Trees—Fruit       2-9         Trees—Nut       10         Trees—Ornamental       11-15         Tree Protectors       29         Tulips       33	
V	
Vegetable Plants 27 Vegetable Seeds 26–27 Vetch 29 Vines 17 Virginia Creeper 17	
W	
Walnuts10Windbreaks15Wistaria17	

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# SEED POTATIONS

AMERICAN WONDER 17 YEARS OF HILL SELECTION

A JOE CONVILLE

CALIFORNIA NORTHERN OFFICE PORTLAND, OREGON